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**WILLINGNESS TO PAY HALAL LOGISTICS AMONG
NON-MUSLIM CONSUMERS IN UNIVERSITI UTARA
MALAYSIA**



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Universiti Utara Malaysia

**MASTER OF SCIENCE MANAGEMENT
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**WILLINGNESS TO PAY HALAL LOGISTICS AMONG
NON-MUSLIM CONSUMERS IN UNIVERSITI UTARA MALAYSIA**



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UUM
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**Thesis submitted to
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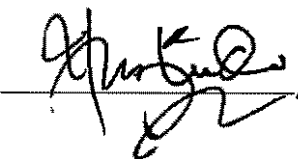
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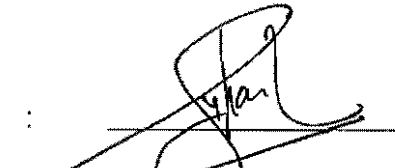
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ABSTRACT

Food companies in Malaysia facing serious problems to meet Halal logistics requirements because majority of Halal logistics companies in Malaysia are still reluctant to adopt Halal logistics to their business operation. The amount of logistics companies in Malaysia was 36,000 units but only 85 logistics companies implement Halal logistics. Hence, this research will help to overcome these issues by getting the information about the demand of Halal logistics. Moreover, examine whether consumers willing to pay for Halal logistics is important because logistics cost was transferred to them. Guided by Theory of Planned Behaviour (TPB), the purpose of this research is to examine the relationship of concern on Halal, perception on Halal logistics, awareness on Halal logistics and knowledge on Halal with willingness to pay Halal logistics among Non-Muslim consumers in Kedah. The survey of 300 Non-Muslim students in University Utara Malaysia (UUM) was analyzed using SPSS Software to indicate the model is well accepted with reliable and valid instruments. The finding revealed that only concern on Halal and perception on Halal logistics influence consumers' willingness to pay Halal logistics. Meanwhile, awareness on Halal logistics and knowledge on Halal were found not to have a significant influence on willingness to pay Halal logistics. The result indicates that the Non-Muslim consumers' willing to pay Halal logistics because they have positive perception toward Halal logistics and they believe products that have Halal tag/label was manufactured with cleanliness and quality. The study contributed to the future investment, beneficial for manufacturers/logistics service provider and quality of life. In addition, the findings of the study show that willingness to pay Halal logistics is differ among religion and state. However, gender does not show a significant different. This finding indicates that gender willingness to pay Halal logistics is highly dependent on one's self.

Keywords: TPB, willingness to pay Halal logistics, Non-Muslim, consumers, concern on Halal, perception on Halal logistics, awareness on Halal logistics, knowledge on Halal.

ABSTRAK

Syarikat makanan di Malaysia menghadapi masalah serius untuk memenuhi keperluan menggunakan perkhidmatan Halal logistik kerana majoriti syarikat Halal logistik di Malaysia masih tidak mahu menggunakan Halal logistik bagi operasi perniagaan mereka. Jumlah syarikat logistik di Malaysia adalah 36,000 unit tetapi hanya 85 syarikat logistik melaksanakan logistik Halal. Oleh itu, kajian ini akan membantu mengatasi isu-isu ini dengan mendapatkan maklumat mengenai permintaan Halal logistik. Tambahan, mengetahui sama ada pengguna bersedia untuk membayar Halal logistik adalah penting kerana kos logistik dipindahkan kepada mereka. Dipandu oleh Teori Perancangan Yang Dirancang (TPB), tujuan kajian ini adalah untuk mengkaji hubungan antara keprihatinan terhadap Halal, persepsi mengenai Halal logistik, kesedaran mengenai Halal logistik dan pengetahuan mengenai Halal dengan kesediaan membayar Halal logistik di kalangan pelanggan bukan Islam di Kedah. Tinjauan terhadap 300 pelajar Non-Muslim di Universiti Utara Malaysia (UUM) dianalisis menggunakan Perisian SPSS untuk menunjukkan model itu diterima dengan baik dengan instrumen yang boleh dipercayai dan sah. Hasil kajian menunjukkan bahawa hanya keprihatinan terhadap Halal dan persepsi mengenai Halal logistik mempengaruhi kesediaan pengguna untuk membayar Halal logistik. Sementara itu, kesedaran mengenai Halal logistik dan pengetahuan mengenai Halal didapati tidak mempengaruhi kesediaan membayar Halal logistik. Hasil kajian menunjukkan bahawa kesediaan pengguna bukan Islam sanggup untuk membayar Halal logistik adalah kerana mereka mempunyai persepsi positif terhadap Halal logistik dan mereka percaya bahawa produk yang mempunyai tag/label Halal dihasilkan dengan bersih dan berkualiti. Kajian ini menyumbang kepada pelaburan masa depan, memberi manfaat kepada pengeluar / penyedia perkhidmatan logistik dan kualiti hidup. Di samping itu, penemuan kajian menunjukkan bahawa kesediaan untuk membayar logistik Halal adalah berbeza di kalangan agama dan negeri. Walau bagaimanapun, jantina tidak menunjukkan perbezaan yang signifikan. Hasil kajian menunjukkan kesediaan jantina untuk membayar logistik Halal bergantung kepada diri mereka sendiri.

Kata kunci: TPB, Kesediaan untuk membayar Halal logistik, Bukan Islam, Keprihatinan, terhadap Halal, persepsi mengenai Halal logistik, kesedaran mengenai Halal logistik, pengetahuan mengenai Halal.

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LIST OF ABBREVIATIONS

Abbreviations	Descriptions
AOHL	Awareness on Halal logistics
BKNS	Biasiswa Kerajaan Negeri Sabah
COH	Concern on Halal
JAKIM	Jabatan Kemajuan Islam Malaysia
JAKOA	Jabatan Kemajuan Orang Asli
JPA	Jabatan Perkhidmatan Awam
KOHL	Knowledge on Halal
MARA	Majlis Amanah Rakyat
POHL	Perception on Halal logistics
PLS	Partial Least Square
PTPTN	Perbadanan Tabung Pendidikan Tinggi Nasional
SPSS	Statistical Package for the Social Sciences
TPB	Theory of Planned Behaviour
UUM	Universiti Utara Malaysia
WTP	Willingness to Pay
WTPH	Willingness to Pay Halal
WTPHL	Willingness to Pay Halal Logistics
YBR	Yayasan Bank Rakyat

CHAPTER ONE

INTRODUCTION

1.0 Introduction

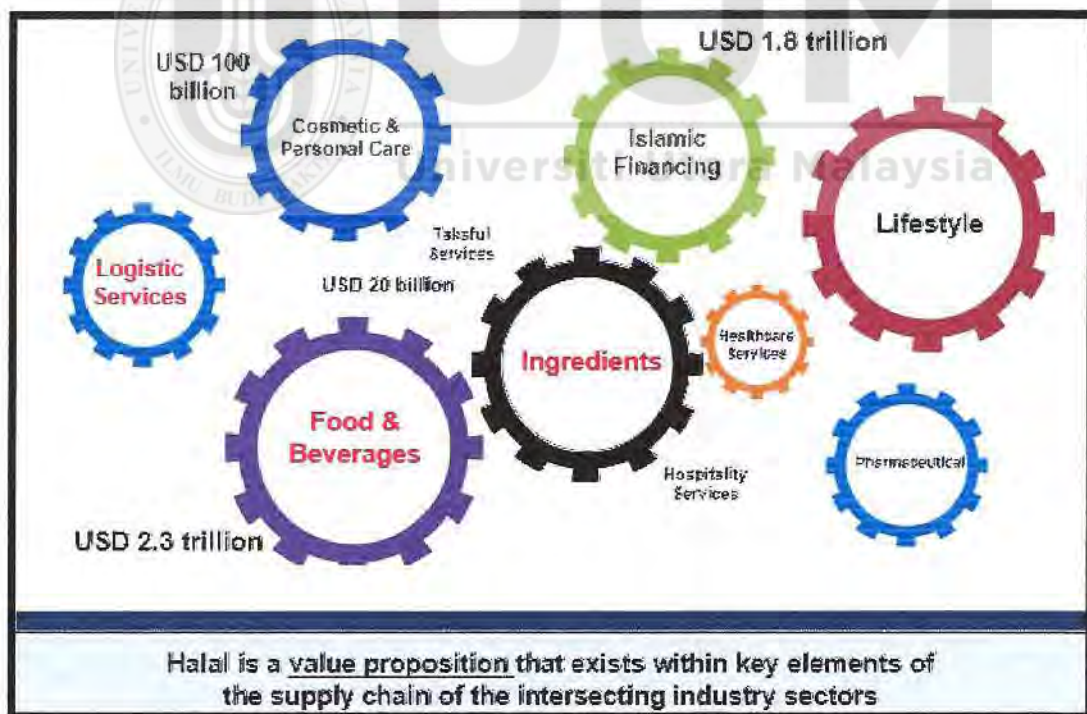
This chapter discusses the background, problem statement, research questions, research objectives, scope of the study, significant of study, definition of the terms and organization of the study.

1.1 Background of the Research

Halal industry is a set of procedures and processes that ensures the “Halal-ness” of a particular action or items, including wellness, commerce, logistics, tourism, leisure and dining. Nowadays, Halal industry becoming a lifestyle, not just for billions of Muslim societies living around the world, but also to Non-Muslim, who have acknowledged the quality standard of Halal (Halal Trade Zone, 2015). Halal industry around the world is worth USD45.3 Billion a year with an annual rate increase of 20% in 2016. The Halal industry worldwide is expected to reach USD58.3 Billion in 2020 (Global Market Value of Halal Products, 2018). According to State of Global Islamic Economy Report 2016/2017 (2017), Halal markets is the new trend and future of Halal industry. On “World Halal Week 2018” conference in Kuala Lumpur, launched by the Prime Minister of Malaysia, YAB Dato’ Sri Mohd Najib bin Tun Abdul Razak said Malaysia total Halal export was RM43.39 billion in 2017 with the increasing of RM1.2 Billion in 2016. The profits generated by multinational companies (RM38 Billion), small and medium enterprise (RM3.8 Billion) and small industries (RM1.5 Billion). The theme for the conference was “Building for the future” and the event included more than 1,000

representatives from more than 50 countries (Halal Focus, Daily Halal market news commentary & analysis, 2018).

Previously, according to Dato' Seri Jamil Bidin, Halal mostly focuses on Halal food and products (as shown in Figure 1.1), but nowadays, Halal industry has expanded to services such as Halal Logistics, Halal Cosmetics and Personal Care, Halal Islamic Financing, Halal Food and Beverages, Halal Ingredients, Halal Healthcare Services, Halal Hospitality Services, Halal Lifestyle and Halal Pharmaceutical (Halal Industry Development Corporation, 2017). Nevertheless, this study only focuses on Halal logistics because Halal logistics are the current circumstances that driven Halal industry (Tieman, Ghazali & Vorst, 2013).



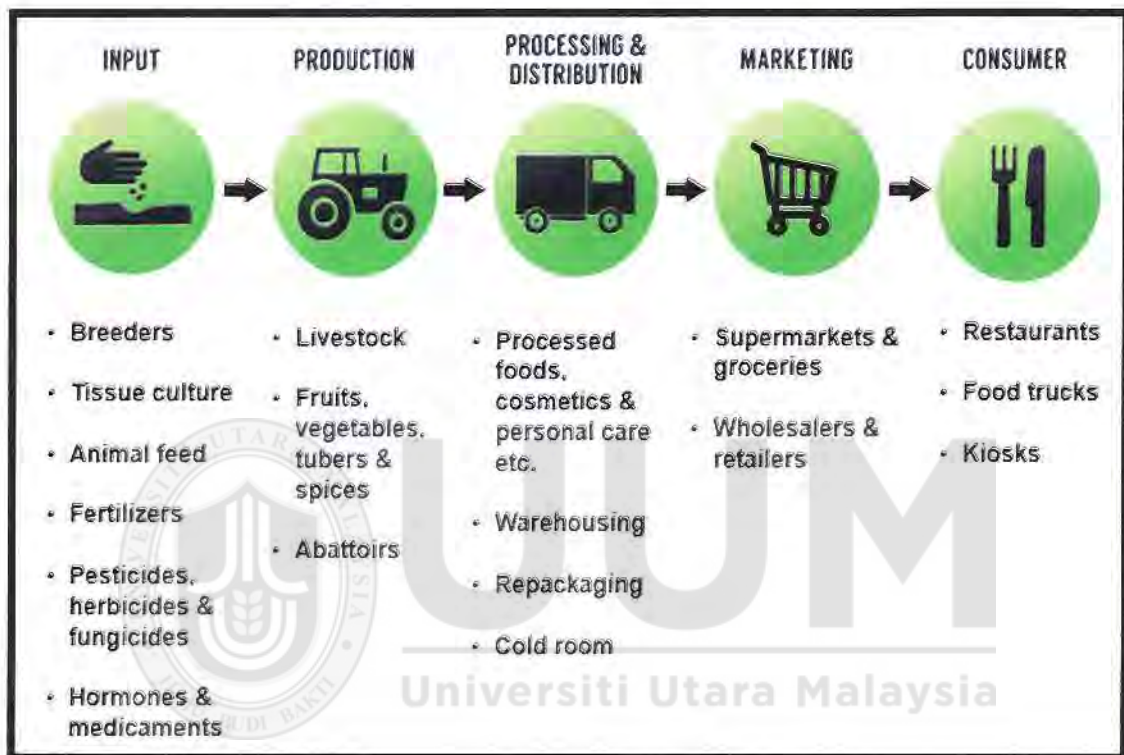
Source: Halal Industry Development Corporation (2017)

Figure 1.1: Halal Products and Services

In addition, as mention by Dato' Seri Jamil Bidin, industry players of Halal products cannot avoid these new trends and they need to be ready for global revolution because Halal logistics nowadays not only concern by a Muslim, but to Non-Muslim (Sadeeqa, Sarrieff, Masood, Farooqi & Atif, 2013). Result of Malaysia Investment Development Authority (MIDA) discovered that in 2030, Halal products as well as Halal logistics will be worth around US\$6.4 Trillion (Talib, Hamid, Zulfakar & Jeeva, 2014). In addition, according to Daily Halal Market News, Commentary and Analysis (2018) Halal logistics is not a choice but a compulsory for all companies to run their business, achieve higher revenue, reduce cost and increase business productivity with the Halal concept.

With regard to the logistics service, the term of "Halal" for logistics service has become one of the reasons for business expansion and the fastest growing consumer segment in the world. According to Talib et al., (2014) Malaysian accept Halal logistics concept because Halal logistics are included in supply chain activities that will make sure consumers receive Halal products at final destination (Soon, Chandia, Regrenstein & Mac, 2013). Moreover, Malaysian society believed that Halal logistics is an approach to avoid contamination of perishable and food products during transportation (Talib, Hamid, Zulfakar & Chin, 2015). For example, the contamination may occur while transporting Halal products such as there is a mixing in the same containers and poor sanitation (unclean) for refrigerated shipment (Tieman, 2007). This contamination will affect the Halal products that already have Halal tag/status. As Halal manufacturer, Halal products and Halal Food are growing tremendously and the main success of the Halal industry relies heavily on logistics service management (Halal logistics) in ensuring the integrity of Halal products, this problem becomes a concern to consumers

(Iskandar, Tan, Razali & Husny, 2012). Due to that reason, this scenario has caused Malaysian consumers not only Muslim but also Non-Muslim demands Halal process or Halal logistics (Omar, Jaafar & Osman, 2013). Figure 1.2 shows the relationship of Halal products with Halal logistics (along the supply chain process).



Source: Halal Industry Development Corporation (2017)

Figure 1.2: Halal Supply Chain Process

Furthermore, determine the willingness to pay Halal logistics among consumers is the most important step because Halal logistics only exist if the consumers are willing to pay for the services. Therefore, this study focuses on consumers' willingness to pay for Halal logistics because logistics cost was transferred to them (Tieman et al., 2013). In addition, by having the information about the demand of Malaysian consumers regarding Halal logistics could encourage the logistics service provider (LSP) implement Halal logistics for their logistics service. At the end of this research, the

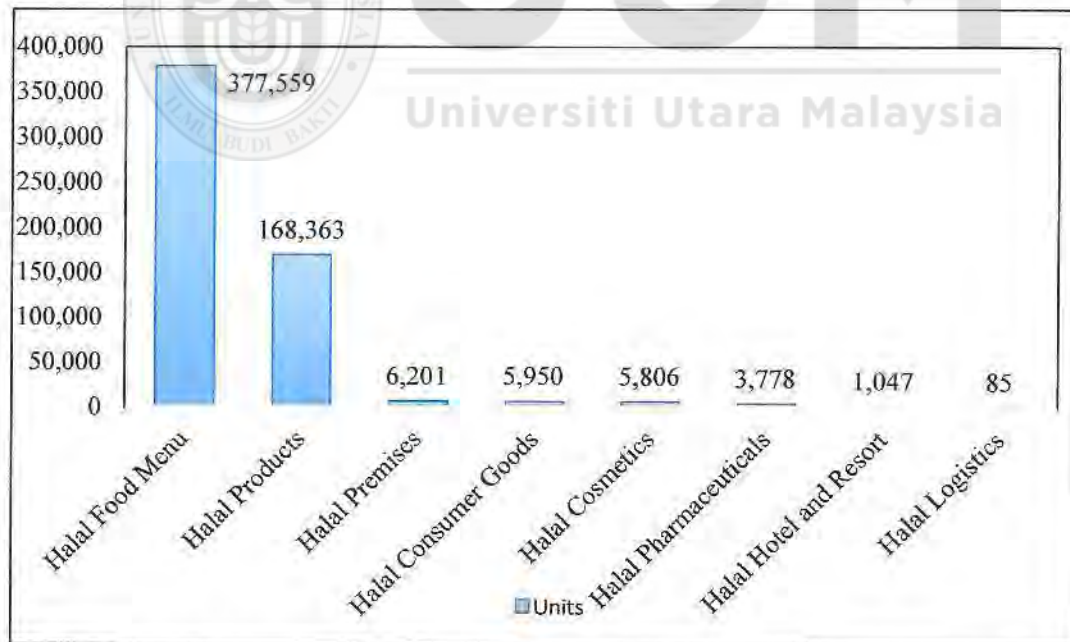
result of this study is expected to help Malaysian government, manufacturer and logistics service provider (LSP) in Malaysia have better understanding about the demand of Halal logistics in Malaysia (Ngah, Zainuddin, & Thurasamy, 2010).

1.2 Problem Statement

Halal logistics industry worth USD17 Billion in potential value of Halal Market. In realizing Halal logistics service is important, Malaysia aggressively promotes this service by giving three incentives to Halal logistics service providers (LSP) (Halal Industry Development Corporation, 2012). The three incentives are “income tax exemption (100% tax exemption for 5 years)”, or, “investment tax allowance (100% investment tax allowance for 5 years)” or “exemption of import duty and sales tax for cold room equipment” (Halal Industry Development Corporation, 2017). The consequences of Malaysia government supporting this Halal logistics industry has attracted logistics service provider (LSP) that consent of high profit business to venture into Halal logistics service (Kamaruddin, Iberahim & Shabudin, 2012). However, the problem still arises, as stated by Dr. Muhadzir in May 2018, there were not more than ten companies in Malaysia have obtained a Halal logistics certificate. Most logistics or transportation companies in Malaysia do not want to invest in Halal logistics and this situation has made food companies in Malaysia facing serious problems to meet Halal logistics requirement (Food Navigator Asia, 2018).

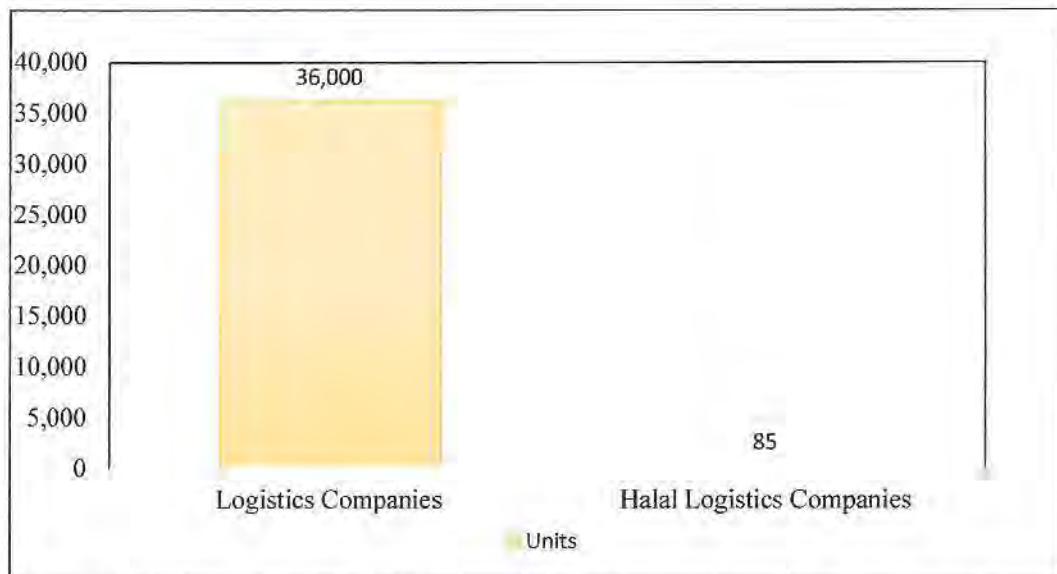
Furthermore, the statistics show in 2017, Halal manufacturers in Malaysia was 2623 companies. However, although Malaysia having lot of numbers of Halal manufacturers (small, medium and international companies) the statistics do not give Malaysia that already known as Islamic country free from the current logistics issues such as the

implementation, enforcement and integrity (Ngah & Thurasamy, 2010). Thus, according to Sham, Abdamia, Mohamed and Thahira (2017) and the current result shows, in April 2018 based on Halal Malaysia Directory (JAKIM), the market value of Halal products keeps on growing but the Halal logistics service is not growing as fast as expected by the Malaysia government (as shown in Figure 1.3). Moreover, as mention by Zailani, Kanapathy, Iranmanesh and Tieman (2015), implementing Halal logistics are no longer are threat but as business opportunities but majority of Halal logistics companies in Malaysia are still reluctant to adopt Halal logistics to their business operation. The evidence can be seen from Services Statistics Transportation and Storage (2016) and Halal Malaysia Directory (2018), the amount of logistics companies in Malaysia was 36,000 units but only 85 logistics companies implement Halal logistics for their services (as shows in Figure 1.4).



Source: Halal Malaysia Directory (2018)

Figure 1.3: Current Result of Halal Companies in Malaysia Based on Halal Categories (2018).



Source: *Services Statistics Transportation and Storage (2016) and Halal Malaysia Directory (2018)*

Figure 1.4: Logistics Company in Malaysia versus Halal Logistics Companies in Malaysia

Therefore, a practical solution for these issues are needed to overcome the problems. Hence, this research will help to overcome these issues because this study focusses on consumers' willingness to pay for Halal logistics. Getting the information about the demand of Halal logistics and whether the consumers willing to pay for Halal logistics is important because logistics cost was transferred to them (Tieman et al., 2013). In addition, by having the information about the demand of Malaysian consumers regarding Halal logistics could encourage the logistics service provider (LSP) to implement Halal logistics for their logistics service (Ngh, Zainuddin, & Thurasamy, 2016).

In addition, Halal logistics is one of the reasons for related business growing and has proven accepted among Non-Muslim, but there only few studies have been done to test the willingness to pay halal logistics among Non-Muslim. Past research had tested the willingness to pay halal logistics but they only focused among Muslim consumers e.g.,

Fathi, Zailani, Iranmanesh and Kanapathy (2016) and Kamaruddin, Iberahim and Shabudin (2012). Therefore, this study will fill in the gap by investigating the willingness to pay Halal logistics among Non-Muslim consumers.

Additionally, this study determines to test the willingness to pay Halal logistics in Kedah area because only few studies have made to test the willingness to pay halal logistics in Penang, Johor, Sabah, Terengganu and Kuala Lumpur (Fathi et al., 2016; Kamaruddin, Iberahim & Shabudin, 2012). Therefore, this study will add more knowledge in the world of transportation and Halal logistics from Malaysia scenario.

Moreover, as stated by Shafiq et al., (2015) nearly 38.7% of Non-Muslim residents in Malaysia welcomed Halal concept for their food. It means that nowadays people are becoming wiser and more concerned with the food they consume (Latif, Mohamed & Sharifuddin, 2014). Past study by Fathi et al., (2016) has revealed Muslim willing to pay for Halal logistics due to concern on Halal (COH) and perception on Halal logistics (POHL). Nevertheless, the study only focuses on Muslim society so due to that reason there are still unclear result, whether the result will still be significant if the focus changes from Muslim to Non-Muslim. Therefore, this study proposes to investigate the willingness to pay Halal logistics due to concern on Halal (COH) and perception on Halal logistics (POHL) among Non-Muslim consumers.

Other than that, Muslim community is aware about Halal but with the increases of people aware about their health, halal products also become popular among Non-Muslim consumers. The reason of this acceptance because Halal concept ensure the food that the consumers consume manufactured with great hygiene and quality

(Mathew, Abdullah & Ismail, 2014). However, although they are evidence Non-Muslim accepts Halal products because they have an awareness about Halal but there is limited research has been made to examine Non-Muslim willingness to pay Halal logistics due to their awareness on Halal (Jaafar, Laph, & Mohamed, 2011; Putri, Samsudin, Rianto & Susilowati, 2017). Moreover, past study by Kamaruddin, Iberahim and Shabudin (2012) had tested four variables: demand, cost, awareness and importance of Muslim willingness to pay for Halal logistics. However, the result only shows significant result for demand and cost. Therefore, this study explores the impact of awareness son Halal logistics (AOHL) on willingness to pay Halal logistics among Non-Muslim consumers.

Golnaz, Zainalabidin, Nasir and Chiew (2012) and Quantaniah, Nureina and Syakinah, (2013) highlighted Non-Muslim in Malaysia acknowledged Halal products with positive reaction to hygiene, health, food safety and food quality. As stated by Dato' Seri Jamil Bidin, Halal logistics need to make sure the products they transfer have good hygiene process, permitted type/amount of chemicals and Shariah permitted ingredients (as shown in Figure 1.5) (Halal Industry Development Corporation, 2017). Therefore, from the result the Non-Muslim consumers have positive perception with Halal products. However, questions arise whether Non-Muslims who have knowledge about halal are willing to pay halal logistics just as Muslims (Yusuf, Shukor & Bustaman, 2016). Therefore, this study will fill in the gap by investigating the willingness to pay Halal logistics due to knowledge on Halal (KOH) among Non-Muslim consumers.



Source: *Halal Industry Development Corporation (2017)*

Figure 1.5: Requirement for Halal Supply Chain

In addition, this study only focuses on Non-Muslim because the willingness to pay Halal logistics among Muslim will give obvious positive result. Muslim consumers are willing to pay for Halal logistics due to the religion requirements and because they understand the importance of Halal logistics as vital to get Halal products (Shafiq, Haque & Omar, 2015). However, the result may differ to Non-Muslim consumers because they do not have knowledge about Halal as much as Muslim and they do not concern about Halal as much as Muslim consumers (Tiemann, Ghazali & Vorst, 2013).

Additionally, this study focuses on students in Universiti Utara Malaysia (UUM) because it is suggested by Teh, Ibrahim, Yahya and Jali (2016) to test whether Universiti Utara Malaysia (UUM) students willing to pay for Halal logistics because Halal logistics process was interrelated with Halal products. In their study revealed 95% of Universiti Utara Malaysia (UUM) students included non-Muslims student in

Universiti Utara Malaysia (UUM) accepts Halal products. Hence, considering recommendation made by Teh et al (2016) this study attempts to continue their study by examining the willingness to pay Halal logistics specifically among students in Universiti Utara Malaysia (UUM).

Moreover, as supported Smith (2002) students are crucial as consumers in any business. They have larger spending power to buy Halal products that interrelated with Halal logistics cost (Shin, Fowler & Lee; 2013, Teh et al, 2016). In addition, the report shows young peoples have a high spending pattern/habit, mainly university or college students (Muniandy, Mamun, Permarupan & Noor, 2014). According to Ahmed, Ghingold and Dahari (2007), they also found that Malaysian students spend a large portion of monthly money at shopping malls or malls. Hence, focus on students as one of buying power is important because majority of students clearly spent large of their money just like other people as consumers. This statement supported by Kenayathulla and Tengyue (2016), although Malaysian students do not have fixed income every months but majority students in Malaysia universities or colleges have scholarships, grants, work-study programs or loans from various sources such as Perbadanan Tabung Pendidikan Tinggi Nasional (PTPN), Majlis Amanah Rakyat (MARA), Jabatan Perkhidmatan Awam (JPA), Yayasan Bank Rakyat (YBR), Petronas Scholarship and scholarship from each state e.g., Biasiswa Kerajaan Negeri Pahang, Biasiswa Kerajaan Negeri Kedah, Biasiswa Kerajaan Negeri Sabah and many more.

Lastly, the willingness to pay Halal logistics publication is still narrow and additional academic research is necessary. Moreover, it been suggested that future study on willingness to pay Halal logistics should attempt the influence of gender, age, marital

status, income and origin (Fathi et al., 2016; Kamaruddin, Iberahim & Shabudin, 2012). Therefore, this study examines the role of demographic factors such as gender, religion and state on determining the level of willingness to pay Halal logistics among Non-Muslim consumers. Hence, the research question is as below.

1.3 Research Questions

This research intends to investigate factors that influence the willingness to pay Halal logistics (WTPHL) among Non-Muslim consumers. Based in the issues elaborated in period section, this research aimed to address the following research questions: -

- i. Does willingness to pay Halal logistics (WTPHL) differs significantly between male and female?
- ii. Does willingness to pay Halal logistics (WTPHL) differs significantly among religion?
- iii. Does willingness to pay Halal logistics (WTPHL) differs significantly among state?
- iv. Do concern on Halal (COH), perception on Halal logistics (POHL), awareness on Halal logistics (AOHL) and knowledge on Halal (KOH) significantly relate with willingness to pay Halal logistics (WTPHL) among Non-Muslim consumers?
- v. Do concern on Halal (COH), perception on Halal logistics (POHL), awareness on Halal logistics (AOHL) and knowledge on Halal (KOH) significantly influence the willingness to pay Halal logistics (WTPHL) among Non-Muslim consumers?

1.4 Research Objectives

The general subjective of this study is to examine the factors that lead to the willingness to pay Halal logistics. The specific objectives are as follows: -

- i. To examine the difference of willingness to pay Halal logistics (WTPHL) between male and female
- ii. To examine the difference of willingness to pay Halal logistics (WTPHL) among religion
- iii. To examine the difference of willingness to pay Halal logistics (WTPHL) among state
- iv. To investigate the correlation between willingness to pay Halal logistics (WTPHL) among Non-Muslim consumers with concern on Halal (COH), perception on Halal logistics (POHL), awareness on Halal logistics (AOHL) and knowledge on Halal (KOH).
- v. To determine the influence of concern on Halal (COH), perception on Halal logistics (POHL), awareness on Halal logistics (AOHL) and knowledge on Halal (KOH) with willingness to pay Halal logistics (WTPHL) among Non-Muslim consumers.

1.5 Scope of the Research

The participants involved in the study are the students of Universiti Utara Malaysia (UUM) because it is suggested by Teh, Ibrahim, Yahya and Jali (2016) to test whether Universiti Utara Malaysia (UUM) students willing to pay for Halal logistics because Halal logistics process is interrelated with Halal products. Hence, considering recommendation made by Teh et al (2016) this study attempts to continue their study

by examine the willingness to pay Halal logistics specifically among students in Universiti Utara Malaysia (UUM).

Moreover, as supported by Smith (2002) university students are crucial as consumers in any business. They have large buying power to buy Halal products that interrelated with Halal logistics cost (Muniady, Mamun, Permarupan & Noor; 2014, Teh et al, 2016). Moreover, it is also found that Malaysian students spend large portion of monthly money at shopping malls or malls (Ahmed, Ghingold & Dahari, 2007). Hence, focus on students as one of buying power is important because majority of students clearly spent large of their money just like other people as consumers. In addition, although Malaysian student they do not have fixed income every month but majority of students in Malaysia universities or colleges have scholarships, grants, work-study programs or loans from various sources (Kenayathulla & Tengyue, 2016)

1.6 Significance of Research

There are several important areas where this research makes an original contribution to theoretical and practical aspects.

1.6.1 Theoretical Contribution

Past study by Fathi et al., (2016) used Theory of Planned Behaviour (TPB) to test the willingness to pay Halal logistics. The result revealed concern on Halal (COH) and perception on Halal logistics (POHL) has significantly influenced the willingness to pay among “Muslim consumers”. However, this study added two new variables (awareness on Halal logistics and knowledge on Halal) to identify whether the four independent variables in this study (concern on Halal, perception on Halal logistics,

awareness on Halal and knowledge on Halal) will give the same result if the respondents change to “Non-Muslim consumers”. As stated by Ajzen and Fishbein (1980) in Theory of Planned Behaviour (TPB), the researcher can add a new factor to become powerful predictors in their study. For that reason, the researcher is confident that the result can contribute to the new knowledge, which support Theory of Planned Behaviour (TPB) and figure out factors that influence the willingness to pay Halal logistics among Non-Muslim consumers.

In addition, this study also contributes to the academic literature regarding willingness to pay Halal logistics. The dependent variable for this study is willingness to pay Halal logistics (WTPHL) and the dependent variables for this study has four predictors: concern on Halal (COH), perception on Halal logistics (POHL), awareness on Halal logistics (AOHL) and knowledge on Halal (KOH). Therefore, this study will contribute to the academic literature regarding willingness to pay Halal logistics and the four independent variables (concern on Halal, perception on Halal logistics, awareness on Halal logistics and knowledge on Halal). In addition to that, this research may contribute to the researchers and students that have interest to continue this topic as their future studies.

1.6.2 Practical Contribution

Past research by Fathi et al, (2012) and Kamaruddin, Iberahim and Shabudin, (2012) has revealed Muslim consumers willing to pay Halal logistics in order for them to get Halal products. However, there is no research has been studied to determine the willingness to pay Halal logistics among Non-Muslim consumers. Due to that reason, this research will give some guideline to the logistics service provider (LSP), whether

the Non-Muslim consumers are willing to pay Halal logistics services or not. Therefore, this research is important for future investment, manufacturer/ logistics service provider (LSP) and human quality of life.

a) Future Investment

Due to the economy growing globally, consumers regardless of religions demand Halal logistics (Sadeeqa et al., 2013). Result from Malaysia Investment Development Authority (MIDA) discovered that in 2030, Halal food industry worth around US\$600 Billion to US\$2.1 Trillion. The Halal products as well as Halal logistics will be worth around US\$6.4 Trillion (Talib et al, 2014).

Thus, according to Grim and Karim (2011), China is still new in Halal industry, but in 2030, Muslim communities in China will be approximately around 29 Million. As Malaysia and China has become a primary partner in the Halal trading business industry, this situation will give opportunities for Malaysia to start as first Halal logistics business leader and become a world leader for Halal logistics industry.

Furthermore, from the result of this study Malaysia government can know the demand and the willingness to pay Halal logistics among Malaysian. At the same time, the result can help Malaysian government to maintain their image, reputation and Malaysia Halal standard as best world example to benchmarking Halal food. The fact is, government intervention in the affairs of Halal business is very important because without government sustained support and effort it would be impossible for Halal food industries in Malaysia to successful become a world leader in Halal industries (Bohari, Hin & Fuad, 2013; Ngah, Zainuddin, & Thurasamy, 2016).

b) Beneficial for Manufacturer/Logistics Service Provider (LSP)

Halal product's market value keep on increasing and this gives a great opportunity to Malaysia that already known as a Muslim country and has an extremely large amount of Halal manufacturer (Sham, Rasi, Abdamia, Mohamed & Thahira, 2017; Ngah et al, 2016; Talib et al., 2015). Previously, manufacturers are worried if they make their business according to Halal compliance because it will increase their business cost. However, these days, making a business operation following Halal compliance becomes opportunities and no longer a business risk (Nik Muhammad, Isa & Kifli, 2009).

According to Zailani, Kanapathy, Iranmanesh and Tieman (2015) many manufacturers/ logistics service providers (LSP) in Malaysia are still afraid to take the chance to adopt Halal supply chain such as Halal logistics. However, following Halal compliance and making an investment in Halal logistics to make consumers get Halal products is actually good for future investments. It is because a worldwide society had accepted Halal concept since they know Halal concept is a good lifestyle for personal hygiene and healthy standard. Moreover, this sector is important and the can be seen from evidence that with Malaysian government supporting this halal logistic service by providing incentives to Halal logistics service providers (HLSPs). The incentives are “income tax exemption (100% tax exemption for 5 years)”, or, “investment tax allowance (100% investment tax allowance for 5 years)” or “exemption of import duty and sales tax for cold room equipment” (Halal Industry Development Corporation, 2012).

c) Quality of Life

Halal logistics are importance because it would give great quality of life to the consumers. Halal logistics have pure sanitation and procedures for its service and manufacture. As mentioned by Mathew, Abdullah and Ismail (2014), Halal logistics ensure Halal products went through various high quality and safe procedures in supply chain process. Saifah (2010) stated that Malaysia has systems to trace Halal products and to fulfil Halal standard. In addition, Department of Islamic Development Malaysia (JAKIM) had produced Halal logo to give consumer assurance for the Halal-ness of the products (Shafiq, Haque & Omar, 2015).

Moreover, as stated by Saifah (2010) Malaysia government has qualified Malaysia standard with international quality standard that only specify for Halal logistics (MS1500:2004). This means that Halal logistics in Malaysia have proven to comply with quality standard required by internationally and will contribute to consumers' quality of life (Verbeke, Rutsaert, Bonne & Vermeir, 2013). Therefore, Halal logistics give great quality of life to consumers because through Halal products the consumers manage to get safe, clean, hygienic and healthy food (Ratanamaneichat & Rakkarn, 2013).

1.7 Definition of Key Terms

The following key terms applied in this study and defined as below:

- 1) **Halal** - In Arabic, Halal means permitted or granted and can be consume by human without fear (Marzuki, Hall & Ballentine, 2012).

- 2) **Halal Logistics** - Halal logistic is a process of the transportation, warehouse, raw materials and procurement process that manage to follow with Shariah principles (Fathi, Zailani, Iranmanesh & Kanapathy, 2016).
- 3) **Willingness to pay** – The value consumers willing to pay to purchase the products if the price equal or less than the amount her or his stated such as USD100 (Christoph, Hahsler, Michael & Reutterer, 2006)
- 4) **Willingness to pay Halal** - The price consumers willing to pay for a products or services that have Halal tag/label (Verbeke, Rutsaert, Bonne & Vermeir, 2013).
- 5) **Willingness to pay Halal Logistics** - The highest value a person willing to pay to get the services. Although they may not be delighted with the cost of Halal logistics services, yet they are still willing to pay for them (Kamaruddin, Iberahim & Shabudin, 2012).
- 6) **Non-Muslim** – Those who do not follow Islam is known as a Non-Muslim and vice versa (Quantaniah, Nureina and Syakinah, 2013).
- 7) **Consumers** – A person that willing to pay to purchase and consume the products or services has been offered (Giese and Cote, 2009)
- 8) **Concern on Halal** - Consumers had thought, interest and care on Halal matter (Jaafar, Laph, & Mohamed, 2011)

9) Perception on Halal Logistics - Opinion or belief of consumers in Halal logistics (Ambali & Bakar, 2013)

10) Awareness on Halal Logistics - The raising of consciousness level about matters that allow Muslim consumption, such as what food they can eat, what type of water they can drink and the way of life they living (Hasan, 2016).

11) Knowledge on Halal – A person know Halal and Haram concept (Elias, Othman, Yaacob & Saifudin, 2016)

1.8 Organization of the Research

This study divides into five chapters: the introduction, literature review, research methodology, data analysis and findings, and discussion and conclusion. The reviews of each chapter are below:

Chapter 1: Research Overview

In chapter one, the initial discussion is about the background of the study and problem statement. Then, research objectives and research question stated as a guidance of this study. After that, the objectives and term definition for each variable explained in this study. Through chapter one, readers will know more about this research.

Chapter 2: Literature Review

In chapter two, related literature review of this topic will highlight. This chapter will discuss the willingness to pay Halal logistics among Non-Muslim consumers. Then, the past research of literature, hypotheses and theoretical framework will explain in this

study. Lastly, the last thing will be discussed in this chapter is Theory of Planned Behaviour (TPB).

Chapter 3: Research Methodology

In chapter three, methodology and instruments of this research expressed as a framework of study. The research methodology, including the research design, procedure of sample, data collection methods and the research instruments.

Chapter 4: Data analysis and findings

In chapter four, the findings obtained from the respondents will thoroughly discuss. The data analysis and findings are explain based on factor analysis, reliability analysis, descriptive, correlation analysis and multiple regression analysis obtain from SPSS software.

Chapter 5: Discussion and Conclusion

Lastly, chapter five is the last chapter of this study. This chapter will encompass a summary discussion on finding, limitation of the study, potential recommendation for future research and conclusion.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This section provides literature related to this topic of study: Halal, Halal logistics research, willingness to pay (WTP), willingness to pay Halal (WTPH) and willingness to pay Halal logistics (WTPHL). In addition, this study also includes general stimulus for dependent variable and independent variables, research hypotheses, theoretical framework and Theory of Planned Behaviour (TPB). Lastly, chapter summary is given.

2.1 Halal

Halal is the legal or permissible word from the Quran. In reference to food, it is a standard of food as set out in the Qur'an of the Islamic holy book. In general, the Quran gives guidance and determines that all foods are halal unless specifically mentioned as illegal (unlawful or prohibited). In Quran, Surah Al-Baqarah verse 172:

"Oh, you who believe! Eat the good things we have given you, and be thankful to a God, if He is the one we worship".

Additionally, the Quran had mentioned the prohibited foods in Surah Al-Ma'idah verses 3:

"Food forbidden to you: carcass, blood, pork, what has been devoted to the other from God, the strangled, the deadly beating, dying through falling from height, and which has been killed by crawling horns. It also devastated wild beasts that saves what you

do the law and which have been slaughtered for idols, and you swear by the arrows of divination ".

"Forbidden to you: anything that dies by itself, blood and swine, whatever has been purified to something other than Allah, whatever is strangled, beaten to death, trapped inside the hole, burned, and what eaten by wild beasts, unless you give the final slap; and what was slaughtered before the idol, or what you share in the draw; (all) are immoral!

Therefore, according to Aidaros (2015) to determine the status of Halal-Haram food and other materials, Islam has established general guidelines on this subject, namely:

- i. All substance (raw materials) and ingredients used must be Halal.
- ii. Naturally, halal animals such as livestock, goats and others, must slaughtered according to Islamic ritual, the ritual determines that the act must done by sane Muslim and to break down the blood vessels and animal respiratory tracts must use sharp cutting tools like knives.
- iii. Halal materials cannot be mixed or in contact with illegal materials such as pig or dog products during storage, transportation, cooking, serve and others. It should understand that the production of halal food is not only beneficial to Muslims, but also to food producers, through public acceptance of their products market.

In conclusion, Islam is the way of the good life. The economic systems are fair, social systems based on unity and cooperation, and political system based on nutrition and consultation are very simple and useful for all human. Due to that reason, Halal concept

in Islam has a very specific motive; preserve the sanctity of religion, maintain an Islamic mentality, preserve life, protect property, protect future generations and maintain respect and self-integrity (Dali, Nooh, Nawai & Mohamed, 2009).

2.2 Halal Logistics Research

According to Dali et al., (2009) a Muslim life revolves around Halal concept. For example, in Muslim life they must earn revenues from Halal sources, merely engaging in Halal transactions and taking Halal food and beverages. However, nowadays, Halal concept not only demanded by Muslim, but also Non-Muslim. The reason is that the hygienic, safeness and quality of Halal concept not only draw intention to Muslim, but to Non-Muslim as well (Nor, Latif, Ismail & Nor, 2016; Mahidin, Norlela & Saifudin, 2016; Omar, Jaafar & Osman, 2012). This study supported by Sham et al., (2017) that revealed in their study Halal concept acceptable by Muslim and Non-Muslim society globally.

Halal concept not only restricted to product ingredients but all activities along the supply chain. As we know, previously Halal industry focused on food processing, but today it covers all aspects of life, such as pharmaceuticals, cosmetics, food services, personal care, Halal trips, Halal hotels and Halal logistics. Moreover, halal concept is now a universal concept and been accepted by Non-Muslim society (Quantaniah, Noreina & Syakinah, 2013; Golnaz et al., 2012). As mentioned by Ali, Makhbul, Tan and Ngah, (2016) there are six aspects of Halal integrity of risk, which are raw material, production, services, outsourcing practice, food security and logistics. Nevertheless, this study focuses on Halal logistics because Halal logistics are current circumstance that driven Halal industry (Tieman, Ghazali & Vorst, 2013).

To support this Halal logistics service, Malaysia government has undertaken many initiatives such as expositions, campaigns, seminars and conferences to promote Halal logistics. Thus, incentives also provided by government to attract entrepreneurs to adopt Halal logistics. The incentives are “income tax exemption (100% tax exemption for 5 years)”, or, “investment tax allowance (100% investment tax allowance for 5 years)” or “exemption of import duty and sales tax for cold room equipment” (Halal Industry Development Corporation, 2012). Government concern on this sector (logistics service) because Halal logistics service interrelated with Halal products. So, it is important to solve the problems which only a small amount of company in Malaysia willing to operate as Halal logistics service (Husny, Hussien and Tan, 2017; Zailani, Iranmanesh, Aziz & Kanapathy, 2017).

Bakar, Hamid, Syazwan and Talib (2014) mention in their study Halal industry can be successful depends on Halal logistics because these two industries were interrelated with each other. In recent years, many researchers start focusing on Halal logistics because Halal industry is growing worldwide. Therefore, by understanding Halal logistics, it can give a huge benefit to the food firms that have an intention to venture in the Halal market (Ali et al., 2016; Talib et al., 2014; Golnaz et al., 2012).

Moreover, it is important to know consumers’ willingness to pay for Halal logistics, especially Non-Muslim customer because logistics cost was transferred to consumers. Thus, Muslim consumers are willing to pay for Halal logistics, but the result may be different to Non-Muslim consumers (Tieman et al., 2013). Hence, this study focuses on willingness to pay Halal logistics among Non-Muslim consumers. Table 2.1 had summarized past studies regarding Halal logistics research.

Table 2.1

Summarized of Past Studies Regarding Halal Logistics Research

No	Year	Authors	Title
1.	2012	Golnaz Rezai, Zainalabidin Mohamed, Mad Nasir Shamsudin & F.C Eddie Chiew	Non-Muslim' Awareness of Halal Principle and Related Food Products in Malaysia
2.	2012	Nuradli Ridzwan Shah Bin Mohd Dali, Mohammad Noorizudin Bin Nooh, Norhaziah Binti Nawai & Hartini Binti Mohammad	Is Halal Products Are More Expensive as Perceived by the Consumers? Muslimpreneuers Challenges and Opportunities in Establishing a Blue Ocean Playing Field
3.	2013	Emi Normalina Omar, Harlina Suzana Jaafar & Muhamad Rahimi Osman	Assessing Halalan-Toyyiban Food Supply Chain in the Poultry Industry
4.	2013	Marco Tieman, Maznah Che Ghazali & Jack G.A.J van der Vorst	Consumer Perception on Halal Meat Logistics
5.	2013	Nur Aniza Quantaniah, Noreina & Nurul Syakinah	Selecting Halal Food: A Comparative Study of the Muslim and Non-Muslim Malaysian Student Consumer
6.	2014	Abu Bakar, Abdul Hamid, Mohamed Syazwan & Ab Talib	Halal Logistics: A Marketing Mix Perspective
7.	2014	Mohamed Syazwan Ab Talib, Abu Bakar Abdul Hamid, Mohd Hafiz Zulfakr & Ananda S. Jeeva	Halal Logistics PEST Analysis: The Malaysia Perspectives
8.	2016	Mohd Helmi Ali, Zafir Mohd Makhbul, Kim Hua Tan & Abdul Hafaz Ngah	Augmenting Halal Food Integrity through Supply Chain Integration
9.	2016	Norlila Mahidin, Siti Norezam Othman & Adam Mohd Saifudin	Halal Logistics Issues among the Food Industry Companies: A Preliminary Study
10.	2016	Mohd Roslan Mohd Nor, Kashif Latif, Mohd Nazari Ismail & Mohammad Nazri Mohd Nor.	Critical Success Factors of Halal Supply Chain Management from the Perspective of Malaysian Halal Food Manufacturers

Table 2.1 (Continued)

11.	2016	Zuhra Junaida Binti Ir Mohamad Husny, Muhammad Zaly Shah Bin Mohamed Hussein & Mohd Iskandar Bin Illyas Tan	Factors that Influence the Intention to Adopt Halal Logistics Services among Malaysian SMEs: Formation of Hypotheses and Research Model
12.	2016	Nuur Fathin Roslan, Fauziah Abdul Rahman, Faradina Ahmad & Noor Irdiana Ngadiman	Halal Logistics Certificate in Malaysia: Challenges and Practices
13.	2017	Zuhra Junaida Binti Ir Mohamad Husny, Muhammad Zaly Shah Bin Mohamed Hussein & Mohd Iskandar Bin Illyas Tan	Service Innovation: Halal Logistics Intention Adoption Model
14.	2017	Rohana Sham, Raja Zuraidah Rasi, Noranita Abdamia, Suhana Mohamed & Thahira Bibi TKM	Halal Logistics Implementation in Malaysia: A Practical View
15.	2017	Suhaila Zailani, Mohammad Iranmanesh, Azmin Azliza Aziz & Kanagi Kanapathy	Halal Logistics Opportunities and Challenges

2.3 Willingness to Pay (WTP)

As mention by Christoph, Hahsler, Michael and Reutterer (2006), willingness to pay (WTP) is the value consumers willing to pay to purchase the products if the price equal or less than the amount her or his stated such as USD100. In addition, Kamaruddin, Iberahim and Shabudin, (2012) defined the willingness to pay (WTP) is the highest value a person willing to pay to get the services. Although they may not be delighted with the cost of Halal logistics services, yet they are still willing to pay for them.

Rezai, Teng, Mohamed and Shamsudin (2013) identified Malaysian willing to pay for green food in Malaysia. The study used simple random sampling method and the food distributed at supermarkets such as Giant, Carrefour, Tesco and Cold Storage. This

study tested four variables; awareness, perception and attitude, subjective norm and perceived behavioural control. The result shows all variables were significant. In summary, the study shows Malaysian are willing to pay for green food because they have an awareness about green concept, they have positive perception that green food can prevent food poisoning, influenced by society that support green environment and are concerned about food safety has led to their decision.

Krystallis and Chrysosoidis (2005) consumers' willingness to pay for organic food significantly influenced by the food quality, safety and environmental protections. The survey shows that the consumers willing to pay for the organic food that they consider the same as fresh food. Owusu and Aniforib (2013) support this study by declaring their finding that customer is willing to pay for organic food because they care about food quality, safety and environmental protections.

Other than that, Asgary, Willis, Taghvaei and Rafeian (2004) shows that respondents living in the rural areas are willing to pay for the health insurance. The result shows that the consumers willing to pay for the health insurance based on education level, age and health care facilities provided in their household areas such as telephone and pipe water access. The amount they are willing to pay based on the socio-economic of the household and the benefit they gain from the insurance. This study supported by Babatunde, Oyediji, Omoniwa and Adenuga, (2016) consumers willing to pay for the health insurance significantly influenced by their age and household income.

In addition, the result from a study by Kang, Stein, Leo and Lee, (2012) revealed consumers that has high concern on environments are willing to pay for premium hotel

green. The study also found out that hotel type also effects willingness to pay for premium hotel green. Guest from mid-priced hotel and luxury hotel was more willing to pay for green practice compare with guest from economy hotel.

Moreover, Hyeo and Hyun (2015) has done a study to recognize factors that influence consumers' willingness to pay luxury room amenities. The finding of the study shows that the most important thing that consumers care about is Wi-Fi service and the least important thing is the telephone service. In addition, some of the consumers are willing to pay more for the service to upgrade the luxury room amenities. From the study, it shows nowadays consumers become more demanding, modernized and sophisticated.

Lewis, Popp, English and Odetola, (2017) found out society in the resident willing to pay for watershed. Factors that influence their willingness were income, bid amount and attitude. Based on the result, ecosystem management that gives benefit to society like job creation on tourism and cost saving for water treatment lead them to pay for the watershed. A similar study made by Shang, Che, Yang and Jiang, (2012) to find out resident willingness to pay river network protection in Shanghai, China. The study revealed that the amount of bid, the number of years live in Shanghai and the distance of river from home influenced their willingness to pay for river network protection.

Lastly, Fatihah and Rahim (2017) tested willingness to pay influenced by bid price, age, gender, education, job and income. The result of the study shows that the customer willingness to pay for the reduction of carbon dioxide emission only significantly influenced by age and income of the respondents. Hence, the result is varied and is depended on the variable test in the study and the level of consumers' willingness to

pay for the products. Therefore, table 2.2 had summarized the summary of past studies regarding willingness to pay.

Table 2.2

Summary of Past Studies Regarding Willingness to Pay (WTP)

No	Year	Authors	Title	Dependent Variable	Independent Variables
1.	2004	Ali Asgary, Ken Willis, Ali Akbar Taghvai & Mojtaba Rafeian	Estimating Rural House- holds' Willingness to Pay for Health Insurance.	Willingness to Pay (WTP)	IV1: Demographic IV2: Economic IV3: General Characteristics of the Village IV4: Health and Medical Care at the Village IV5: Health and Insurance
2.	2005	Athanasios Krystallis & George Chrysosoidis	Consumers' willingness to pay for organic food: Factors that affect it and variation per organic product type	Willingness to Pay (WTP)	IV1: Environmental Protection IV2: Food Quality IV3: Safety
3.	2012	Kyung Ho Kang, Laura Stein, Cindy Yoonjoung Heo & Seoki Lee.	Consumer willingness to pay for green initiative of the hotel industry.	Willingness to Pay (WTP)	IV1: Customer Concern IV2: Hotel Type
4.	2012	Zhaoyi Shang, Yue Che, Kai Yang & Yu Jiang	Assessing Local Communities' Willingness to Pay for River Network Protection: A Contingent Valuation Study of Shanghai, China.	Willingness to Pay (WTP)	IV1: Socio-economic IV2: Value Orientation IV3: Recognition IV4: Awareness
5.	2013	Victor Owusu & Michael Owusu Aniforib	Consumer Willingness to Pay a Premium for Organic Fruit and Vegetable in Ghana.	Willingness to Pay (WTP)	IV1: Socio-economic IV2: Awareness and Perception IV3: Product Attribute
6.	2013	Golnaz Rezai, Phuah Kit Teng, Zainalabidin Mohamed & Mad Nasir Shamsudin	Consumer Willingness to Pay for Green Food in Malaysia	Willingness to Pay (WTP)	IV1: Awareness IV2: Perception and Attitude IV3: Subjective Norm IV4: Perceived Behavioural Control

Table 2.2 (Continued)

7.	2015	Cindy oonjong, Heo & Sunghyup Sean Hyun	Do Luxury Room Amenities Affect Guests' Willingness to Pay?	Willingness to Pay (WTP)	IV1: Hotel Setting IV2: Hotel Type IV3: Ethnicity IV4: Trip Purpose
8.	2016	R. O. Babatunde, O. A. Oyediji, A. E. Omoniwa & A. H. Adenuga	Willingness-To-Pay for Community Based Health Insurance by Farming Households: A Case Study of Hygeia Community, Health Plan in Kwara State, Nigeria.	Willingness to Pay (WTP)	IV1: Age IV2: Farm Size IV3: Income
9.	2017	S. Nur Fatimah and AS Abdul Rahim	The Willingness to Pay of Air Travel Passengers to Offset their Carbon Dioxide (Co2) Emissions: A Putrajaya Resident Case Study.	Willingness to Pay (WTP)	IV1: Bid IV2: Age IV3: Gender IV4: education IV5: Job IV6: Income
10.	2017	Sarah E. Lewis, Jennie S. Popp, Leah A. English & Tolulope O. Odetola	Willingness to Pay for Riparian Zones in an Ozark Watershed Hadron Collider	Willingness to Pay (WTP)	IV1: Attitude IV2: Bid IV3: Demographic IV4: Experience IV5: Knowledge IV6: Perception

2.4 Willingness to Pay Halal (WTPH)

Willingness to pay Halal is the price consumers willing to pay for a products or services that have Halal tag/label (Verbeke, Rutsaert, Bonne & Vermeir, 2013). As stated by Halal Malaysia Directory (2018) Halal products and services includes: cosmetics, equipment, pharmaceuticals, medical services, products health, media and electronics, slaughtering, marketing, branding, financial, packaging and logistics. Consumer willing to pay for products and services that have Halal tag/label because Halal covers all parts of the Islamic life, not limited to food and drink alone, but also for safety, animal welfare, social justice and a sustainable environment (Razak, Alias, Samad, Naseri, Ahmad & Baharuddin, 2015).

Past study by Verbeke et al., (2013) disclosed in their study that female gender more favor and willing to pay for Halal products. Thus, around 13% of the Muslim customer willing to pay more to get Halal meat at butcher shop than buying the Halal meat at the supermarket. Female gender has more concern on Halal products and the status of the products because they have responsibility to in charge with household food. However, other aspects such as demographic characteristics, economic characteristics and general characteristics of the villagers influence they willingness to pay.

Another study by Putri et al., (2017) revealed consumers' willingness to pay for Halal. The result is significant for income, education, consumption, awareness, family and concern. However, the result shows negative result for age. In this study, 96 respondents out of 102 respondents were married women willing to pay for Halal. The study also revealed the academicians play important role using mouth to mouth and social media to spreading information about Halal using slogan safe and complete. Therefore, Table 2.3 had summarized the summary of studies regarding past willingness to pay Halal.

Table 2.3

Summary of Past Studies Regarding Willingness to Pay Halal (WTPH).

No	Year	Authors	Title	Dependent Variable	Independent Variables
1.	2013	Wim Verbeke, Pieter Rutsaert, Karijn Bonne & Iris Vermeir	Credence Quality Coordination and Consumers' Willingness-to-pay for Certified Halal Labelled Meat.	Willingness to pay for Halal (WTPH)	IV1: Female Gender IV2: First Generation IV3: Education IV4: Acculturation IV5: Consumption Frequency IV6: Trust in Halal Issue IV7: Importance of Halal Label
2.	2017	Wilda Rizkilia Putri, Muh Samsudin, Edy Rianto & Indah Susilowati	Consumers' Willingness to Pay for Halal Labelled Chicken Meat.	Willingness to pay for Halal (WTPH)	IV1: Income IV2: Education IV3: Age IV4: Consumption IV5: Awareness IV6: Family

2.5 Willingness to Pay Halal Logistics (WTPHL)

Willingness to pay Halal logistics is the highest value a person willing to pay to get the services. Although they may not be delighted with the cost of Halal logistics services, yet they are still willing to pay for them (Kamaruddin, Iberahim & Shabudin, 2012). As indicated by Pahim, Jemali and Mohamad, (2012) Halal logistics are important as assurance to ensure there is no contamination occur during the transportation process. Halal tag on the products do not indicate the Halal-ness of the products because contamination may happen while the products is in a warehouse or during the transportation process (Fathi et al., 2016).

In addition, Malaysia Halal standard accepted around the world in halal food industries. Due to that reason, Malaysia becomes a leader and the best world example to benchmark Halal food (Kamaruddin, Iberahim & Shabudin, 2012). As stated by Pahim et al., (2012) this has caused Halal industries grow rapidly internationally. Thus, Halal concept also become a symbol of quality consumption and lifestyle worldwide (Lada, Tanakinjal & Amin, 2009). Although, different country has different requirement for their logistics industry but Halal logistics had received attention academically and practically. Thus, at the present, globalization is not a barrier in world trade business between countries.

In past studies, Kamaruddin, Iberahim and Shabudin (2012) using four factors: demand, cost, awareness and importance as variables to examine the willingness to pay Halal logistics among Muslim consumers in Kuala Lumpur and Marang (Terengganu). The result shows that Muslim respondents in Selangor and Marang are willing to pay Halal logistics because of the demand and cost toward halal logistics service. The result was

obvious because a Muslim are willing to pay halal logistics because of religion demand for Halal compliance.

After that, Fathi et al., (2016) tested three variables: individual characteristics (perception, concern), environment characteristics (media coverage) and logistics provider characteristics (capability, image) to determine the willingness to pay Halal logistics among Muslim consumers in Penang, Johor, Sabah and Kuala Lumpur. The result shows that Muslim consumers from Penang, Johor, Sabah and Kuala Lumpur willing to pay Halal logistics due to their positive perception on Halal logistics, concern on Halal and media coverage aspect. Therefore, the study to investigate the willingness to pay Halal logistics among consumers in Malaysia will contribute advance knowledge in Halal logistics demands. Therefore, Table 2.4 had summarized the summary of studies regarding past willingness to pay Halal logistics.

Table 2.4
Summary of Studies Regarding Past Willingness to Pay Halal Logistics (WTPHL).

No	Year	Authors	Title	Dependent Variable	Independent Variables
1.	2012	Rohana Kamaruddin, Hadijah Iberahim & Alwi Shabudin	Willingness to Pay for Halal Logistics: The Lifestyle Choice	Willingness to Pay for Halal Logistics (WTPHL)	IV1: Demand IV2: Cost IV3: Awareness IV4: Importance
2.	2016	Elahe Fathi, Suhaiza Zailani, Mohammad Iranmanesh & Kanagi Kanapathy.	Drivers of Consumers' Willingness to Pay for Halal Logistics	Willingness to Pay for Halal Logistics (WTPH)	IV1: Individual Characteristics (Perception on Halal Logistic, Concern on Halal) IV2: Environment Characteristics (Media Influence) IV3: Logistic Provider Characteristics (Service Capability, Image)

Nevertheless, this study will examine the willingness to pay Halal logistics among Non-Muslim consumers. This study is important because Halal logistics are included in the supply chain activities that will make sure the consumers receive Halal product at final destination (Fathi et al., 2016). Thus, the method to determine the willingness to pay had proven beneficial instrument to get respondents' information and had used in different areas: health, marketing, environment and transportation (Babatunde, Oyediji, Omoniwa & Adenuga, 2016).

On the other hand, there is limited study to examine the willingness to pay Halal logistics among Non-Muslim in Kedah. Therefore, the objective of this study is to examine whether there is different of willingness to pay Halal logistics (WTPHL) between male and female (gender), Non-Muslim religion and state in Malaysia. Moreover, the objective of this study to investigate the relationship and the influence of concern on Halal (COH), perception on Halal logistics (POHL), awareness on Halal logistics (AOHL) and knowledge on Halal (KOH) with the willingness to pay Halal logistics among Non-Muslim consumers.

2.5.1 Concern on Halal

Halal is the term from Qur'an and used in Islam, which means justified or prohibited. Now, Halal had become a global concept, but no party can claim Halal concept without complying with Islamic Law. The concept of Halal covers all parts of the Islamic life, not limited to food and drink alone, but also for safety, animal welfare, social justice and a sustainable environment. Halal and Toyyiban mean clean and illustrate the symbol of tolerance to the cleanliness, safety and quality of food consumed by Muslims (Razak et al., 2015; Marzuki, Hall & Ballentine., 2012).

Jaafar, Laph and Mohamed (2011) stated that concern on Halal means the consumers had thought, interest and care on Halal matter. However, consumers nowadays not only concerned with manufacturing process, but they are also interested to know the whole process of supply chain activities. In addition, according to Elias et al, (2016) consumers are concerned on Halal and has strong confidence with halal logo (JAKIM) as halal logo become an indicator for consumers to know whether the products are Halal or not.

Kang et al., (2012) revealed in their study that the main reason the consumer concern and accept Halal because of the food safety. Today, not only in China, but also in Malaysia has faced controversy about baby milk products containing melamine that is harmful for people's health. This issue won't happen if the manufacturers and Logistics Service Provider (LSP) followed Halal requirement (Fathi et al., 2016). As stated by Dato' Seri Jamil Bidin (2017), Halal logistics need to make sure the products they transfer have good hygiene process, permitted type/amount of chemicals and Shariah permitted ingredients. It is because products and services that follow Halal concept must have an assurance that the food is safe, clean and won't be harmful to people's health (Fathi et al., 2016).

A study made by Ireland and Rajabzadeh (2011) revealed that consumers included Non-Muslim really concern with food that Halal tag/status. The result shows that 86.5% consumers are concerned with food that has Halal label but actually not safe to be consume. In addition, the consumer also worries contamination may happen while the products are in supply chain process. Therefore, based on the finding of the above studies, the following hypothesis developed:

H4a: Concern on Halal (COH) relates significantly with willingness to pay Halal logistics (WTPHL)

H5a: Concern on Halal (COH) influence significantly with willingness to pay Halal logistics (WTPHL)

2.5.2 Perception on Halal Logistics

A perception is the opinion or belief of consumers in Halal logistics. According to Ambali and Bakar, (2013) customer has a positive perception on Halal logistics because Halal logistics lead to Halal Products. Customer believe that Halal products indicate healthy lifestyle. Due to that customer has a positive perception on Halal logistics and Halal product are widely accepted by Muslim and Non-Muslim around the world. (Aziz, Vui, Yuhanis & Chok, 2012).

Understanding consumer perception on Halal logistics manage us to fulfill their needs and satisfy them. For example, Lewis et al., (2017) discover that the perception of quality has made consumers willing to pay for the watershed. The residents are willing to pay an increase of \$80.07 taxes to get ecological service because they have positive perception and believe ecosystems quality is worthy. It can conclude that a positive perception can make consumer willing to pay for the services, foods or products (Grunet, 2005).

Halal products viewed as a religious requirement for Muslim. However, nowadays even the Non-Muslim has also begun to claim for Halal food because halal food perception is hygiene, cleanliness and trustworthy (Fathi, Zailani, Iranmanesh & Kanapathy,

2016). Past research by Golnaz, Zainalabidin and Mad Nasir (2012) revealed in their study that at least 79% of Non-Muslim has positive perception on halal due to lot of Halal advertisement. However, the question has appeared whether Non-Muslim a positive perception on Halal makes them willing to pay for Halal logistics. In addition, Aziz, Vui, Yuhanis and Chok, (2012) stated that, Halal products have positive perception among Non-Muslim because they classify Halal product as clean, pleasant and care slaughtering process of the animals.

Consumer have positive perception that Halal logistics will lead consumers' willingness to pay for it. The willingness to pay and perception related in some aspects such as the quality of the products, risk and safety of the food and the benefit consumers get. As stated by Golnaz et al., (2012) and Haque, Chin and Debnath, (2015) Non-Muslim in Malaysia have good perception on Halal logistics and accepts Halal food principal related to food hygiene, quality, safety and health. Previous study by Fathi et al., (2016) revealed in their study with 313 random consumers that consumers' perception on Halal logistics has a significantly positive effect on consumer willingness to study. Therefore, based on the finding of the above studies, the following hypothesis developed:

H4b: Perception on Halal logistics (POHL) relates significantly with willingness to pay Halal logistics (WTPHL)

H5b: Perception on Halal logistics (POHL) influence significantly with willingness to pay Halal logistics (WTPHL)

2.5.3 Awareness on Halal Logistics

As stated by Hasan (2016), awareness on Halal logistics defined as the rising of consciousness level about matters that allow Muslim consumption, such as what food they can eat, what type of water they can drink and the way of life they living. Therefore, Halal logistics had been defined as the practice of procurement management, planning, process, implementation and handling of efficient flow and storage of goods, handling materials, livestock, semi-finished or finished inventory, food and non-food, services and related information through the organization and supply chain that comply with the general principles of Shariah (Tieman, 2013); Christopher, 2011).

A previous study from Zoric and Hrovatin (2012) shows that people are willing to pay because of their awareness as factor that influence their decision. Putri et al., (2017) revealed in their study that consumers' willingness to pay for Halal labelled chicken because of their awareness on Halal. Halal food is really an important issue, especially for Muslim consumers. Muslim consumers willing to pay more for the assurance of Halal chicken meat they consume. The assurance of the chicken meat purity and Halal-ness of the products. It is admitted that people has increased their awareness on Halal logistics due to the Halal concept which are animal welfare, health, hygienic and quality (Latif, Mohamed & Sharifuddin, Abdullah & Ismail, 2014).

Consumers' willingness to pay influenced by the awareness they have towards the importance of the products. The result shows the consumers socio-economic are an important factor to determine consumers' willingness to pay, but it plays a different role because the awareness of the benefit of pay the blueberries for their health have a different impact (Hu, Zhang, Moga & Neculita, 2013). Supported by Shang et al.,

(2012) the communities' willingness to pay for river protection due to the awareness of the value of the river network. In recent years, communities' awareness towards the changes of the rivers has increased, consumers believe that the aesthetic, ecological and environmental changes may lead to the water pollution has made them willing to pay more for river protection.

In addition, Rezai et al., (2013) revealed in their study prove that the consumers' willingness to pay when they have an awareness with the concept of the products: food safety, animal welfare, environmental issues and health consciousness. The increasing of the awareness among people with the Halal logistics has made them willing to pay Halal logistics to get Halal products. Moreover, Halal tag on the products does not guarantee there is contamination happen during storage and delivery process (Pahim et al., 2012). Therefore, based on the finding of the above studies, the following hypothesis developed:

H4c: Awareness on Halal logistics (AOHL) relates significantly with willingness to pay Halal logistics (WTPHL)

H5c: Awareness on Halal logistics (AOHL) influence significantly with willingness to pay Halal logistics (WTPHL)

2.5.4 Knowledge on Halal

Nowadays, Halal industry has become concern by Muslim but also other religion. Halal industry also one of the fastest growing consumer segment in the world. Halal mostly focuses on Halal food and products, but nowadays, Halal industry has expanded to

services such as Halal travel, Halal hospitality, Halal logistics and so on (Razak et al., 2015; Sadeeqa et al., 2013). Elias et al., (2016) indicated that a person's have knowledge on Halal means that they know Halal and Haram concept. Moreover, it also means that the person has any information about the Halal Toyyiban concept. At the same time, that person must implement Halal Toyyiban concept from production, storage, package, procurement and logistics process.

Hasan (2011) confirmed that Non-Muslim in Malaysia have knowledge about Halal. Although, Non-Muslim does not have knowledge on Halal as much as Muslim consumers, but Non-Muslim in Malaysia understands that the food that has Halal logo are considered as the cleanest and hygienic food to be consume. Nowadays, Halal logo not only can convince Muslim, but also Non-Muslim because they believe that the food produced according to Shariah compliance.

A previous study by Godek and Murray (2008) stated that knowledge is the most important factors for a human to make a decision whether they are willing to pay or not. According to Lu and Shon (2012), consumers that have knowledge on Halal will have a highest willingness to pay. Since they are more responsible than those do not knowledge on Halal. In addition, having knowledge on Halal is the most precious thing that will influence the willingness to pay because the individual knowledge will influence their specific decision. This is because every day a human will need to make several decisions and the knowledge they have about the products will make them made a rational decision (Godek & Murray, 2008). Therefore, based on the finding of the above studies, the following hypothesis developed:

H4d: Knowledge on Halal logistics (KOH) relates significantly with willingness to pay Halal logistics (WTPHL)

H5d: Knowledge on Halal logistics (KOH) influence significantly with willingness to pay Halal logistics (WTPHL)

2.6 Summary of Research Hypotheses

Five major hypotheses were developed to address the research question and research objective. The hypotheses in this study are as follows: -

a) Hypotheses 1

Willingness to pay Halal logistics (WTPHL) differ between male and female

b) Hypotheses 2

Willingness to pay Halal logistics (WTPHL) differ among religion

c) Hypotheses 3

Willingness to pay Halal logistics (WTPHL) differ among state

d) Hypotheses 4

H4a: Concern on Halal (COH) relates significantly with willingness to pay Halal logistics (WTPHL)

H4b: Perception on Halal logistics (POHL) relates significantly with willingness to pay Halal logistics (WTPHL)

H4c: Awareness on Halal logistics (AOHL) relates significantly with willingness to pay Halal logistics (WTPHL)

H4d: Knowledge on Halal (KOH) relates significantly with Willingness to pay Halal logistics (WTPHL)

e) Hypotheses 5

H5a: Concern on Halal (COH) influence significantly with willingness to pay Halal logistics (WTPHL)

H5b: Perception on Halal logistics (POHL) influence significantly with willingness to pay Halal logistics (WTPHL)

H5c: Awareness on Halal logistics (AOHL) influence significantly with willingness to pay Halal logistics (WTPHL)

H5d: Knowledge on Halal (KOH) influence significantly with willingness to pay Halal logistics (WTPHL)

2.7 Research Framework

Based on the development of the hypotheses, the theoretical framework illustrated in the Figure 2.1. This study concern with the relationship between concern on Halal (COH), perception on Halal logistics (POHL), awareness on Halal logistics (AOHL) and knowledge on halal (KOH) and willingness to pay Halal logistics (WTPHL).

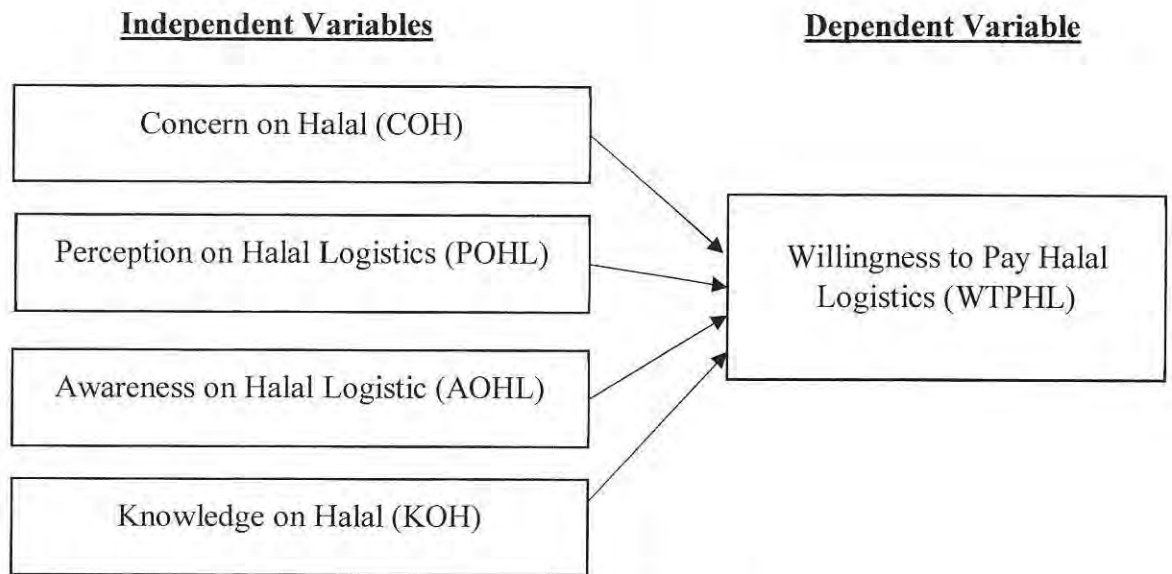


Figure 2.1: Research Framework

2.8 Related Theory

To explain the variables, the researcher used Theory of Planned Behavior (TPB) and the explanation given in following section.

2.8.1 Theory of Planned Behaviour (TPB) History

Theory of Planned Behaviour (TP) introduced by Icek Ajzen on 1985 from the Theory of Reasoned Action (TRA) and the theory has been reviewed in 1991 and being used until now (Tarkiainen & Sundqvist, 2005). The theory was formed and supported by empirical prove. TPB predicts people's behavior driven by attitude, subjective norms and perceived behavioral control. Human attitudes have an effect on their behavior and is influence by various factors. (Ajzen & Fishbein, 1980).

Three components Theory of Planned Behaviour (TPB) are attitude, subjective norms and perceived behavioral control. In Theory of Planned Behaviour (TPB), the attitude is the judgement of human behavior, the subjective norms look into the expectation and social pressure to behave and the perceived behavioral control is whether the human is

comfortable or burdened to act that way (Ajzen, 1991). Therefore, table 2.5 summarized the criteria of the Theory of Planned Behavior (TPB) Criteria.

Table 2.5

Theory of Planned Behavior (TPB) Criteria

No.	Criteria	Theory of Planned Behaviour
1	Introduced by	1985 – Icek Ajzen develop TPB from Theory of Reasoned Action 1987 – Icek Ajzen review the TPB 1991 – Icek Ajzen make final version of TPB and this theory being use until now
2	Definition	TPB predicts people behavior influence by attitude, subjective norms and perceived behavioral control.
3	Objective	To predict people behavior more accurate.
4	Major theme	Attitude, subjective norms and perceived behavioral control.
5	Application	TPB allowing us to make prediction on human intention and behavior when they want to make decision with different selection of products or whether to purchase the product

Source: Ajzen (1991)

2.8.2 Theory of Planned Behaviour (TPB) and Willingness to Pay (WTP)

There were various studies made regarding willingness to pay which applied to Theory of Planned Behaviour (TPB). Nurse, Onozaka and McFadden (2010) focus on perceiving consumer effectiveness, which are environment, economy, social fairness and social responsibility to determine the respondents' willingness to pay. Other than that, Voon, Ngui and Agrawal (2011) examine customer willingness to pay according with attitude, subjective norm and affordability (behavioral control). The result shows that the attitude and subjective norms were significant with willingness to pay. However, the result shows affordability does not affect the willingness to pay.

In 2013, Lin, Hsu and Chin tested the Theory of Planned Behaviour (TPB) with age, gender, perceived benefits and perceived cost. The result shows that only age and gender are significant to the willingness to pay. After that, Studies, Heikal, Khaddafi and Lhokseumawe (2014) also uses Theory of Planned Behaviour (TPB) but added with prediction of past behavior. The result shows attitude, subjective norms, perceived behavioural control and past behavioural significantly influence the willingness to pay.

Then, Stranieri, Ricci and Banterle (2016), tested Theory of Planned Behaviour (TPB) with attitude, perceived behavioural control, habit, socio-demographic and individual characteristics. In the study, the result revealed that concern do not significantly affect willingness to pay but other variables a show positive relationship with willingness to pay. At the same year, Fathi et al., (2016) use Theory of Planned Behaviour (TPB) tested the willingness to pay. The result revealed a perception on Halal logistics and concern on Halal significantly influence the willingness to pay among Muslim consumers. Hence, this study wishes to identify whether the perception on Halal logistics and concern on Halal will give the same result if the respondents change to Non-Muslim consumers. Thus, this study added two new variables: awareness on Halal logistics (AOHL) and knowledge on Halal (KOH).

Therefore, this study uses Theory of Planned Behaviour (TPB) to investigate factors that influence the willingness to pay Halal logistics among Non-Muslim consumers with four variables: concern on Halal (COH), perception on Halal logistics (POHL), awareness on Halal logistics (AOHL) and knowledge on Halal (KOH). In this study, the three components stated will affects and lead respondents' willingness to pay Halal logistics. Figure 2.2 represents the Theory of Planned Behaviour (TPB) model.

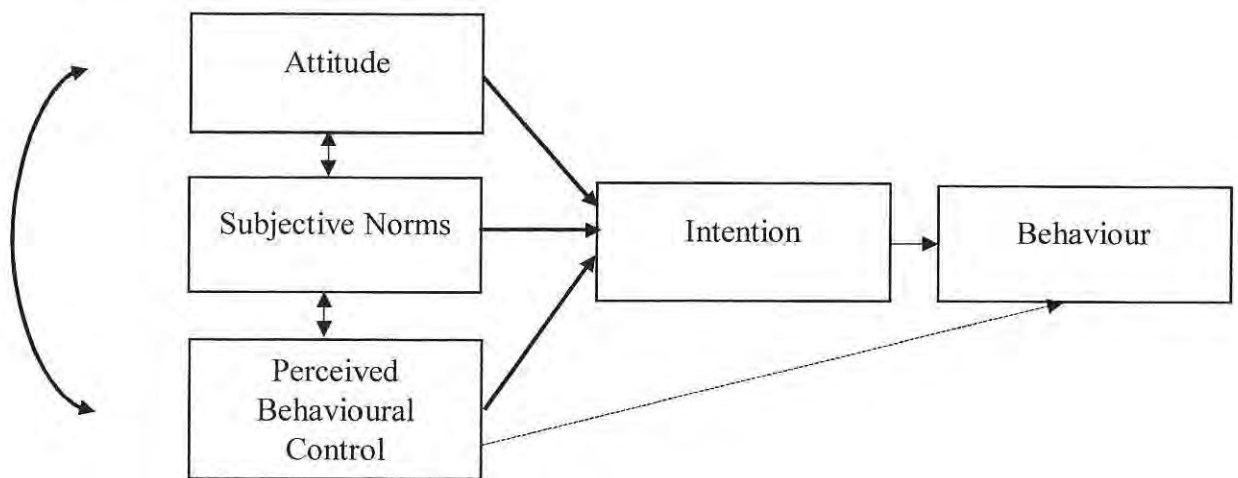


Figure 2.2: Theory of Planned Behavior (Ajzen, 1991)

2.8.2.1 Attitude

Attitude define as favorable or unfavorable view or feeling that occupies in the behavior (Ajzen & Fishbein, 1980). According to Ajzen (1991), attitudes acts as a function of believe that will lead to the positive or negative outcomes. Commonly, the beliefs that known as behavioral beliefs that influence consumers willing to pay to get certain products or services.

In this study, awareness on Halal logistics act as attitude that influence consumers intention and behavior (willing to pay halal logistics) or not. The questionnaire asks the respondents three questions which are: whether Halal logistics is important for them to ensure consumer get hygiene, quality, healthy and safe products, whether it is important for consumer the product store in place that hygiene, quality and safe and whether it is important for consumers the logistics service provider transport the product with honest and ethical attitude.

2.8.2.2 Subjective Norm

Subjective norm commonly referred as an expected behavior of individual perception among a group of people in any situation (Ajzen & Fishbein., 1980). Subjective norms are important because it can become the indicator for people's willingness to pay so they accepted by others (Armitage & Conner, 2001). For example, social pressure from family, friends and society that encourage them to perform the behavior and based on others perception. Supported by Sun and Scot (2005) mentioned in their study that an individual forms subjective norm in order to be accepted by friend, group and society.

In this study, the perception on Halal logistics (POHL) from family perspective will be the indicators for subjective norms and use to test whether the perception on Halal logistics (POHL) will influence the willingness to pay Halal logistics (WTPHL). The questionnaire ask from the respondents are: whether Halal logistics is important for them and their family in preserving the halal status of products, whether Halal logistics is important for them and their family to avoid the cross-contamination during transportation and whether Halal logistics is important for them and their family to avoid the cross-contamination during storage. Hence, in order to accept by family, group of friends and society, the subjective norms will form the customer intention and behavior (willing to pay).

2.8.2.3 Perceived Behavioural Control

Perceived behavioural control is defined as the individual assessment of own capability regarding the behavioural engagement (Ajzen, 1991). The previous study found that the perceived behavioural control will influence willingness to pay (Stranieri, Ricci & Banterle, 2016; Heikal, Khaddafi & Lhokseumawe, 2014; Lin, Hsu & Chin, 2013).

These three study has proven that the perceived behavioral control has significantly influenced the willingness to pay.

In this study, concern on Halal (COH) will play the role as perceived behavioural control. It predicts that the concern on Halal (COH) will influence the consumer intention and behavior (willingness to pay). The questionnaire asks the respondents whether they have plan to consume food that is Halal, whether they confident to consume with Halal products and whether they will make an effort to check on the ingredients of the products. Therefore, Table 2.6 summarized study using Theory of Planned Behaviour (TPB) and Willingness to Pay (WTP).

Table 2.6

Summarized Study of Theory of Planned Behaviour (TPB) and Willingness to Pay (WTP)

No	Author (Year)	Construct	Variables	Method	Findings
1.	Elahe Fathi, Suhaiza Zailani Mohammad Iranmanesh & Kanagi Kanapathy (2016)	Extend on demand (ED), Perception on Halal logistics (PHL), Concern on Halal (CL), Media coverage (MC), service capability (SC) and 3PL image (IMG).	Extend on Demand (ED), Perception on Halal logistics (PHL), Concern on Halal (CL), Media coverage (MC), service capability (SC) and 3PL image (IMG).	Partial Least Square (PLS) methodology	-In this study, ED, PHL, CL and MC show positive relationship with WTP Halal logistics. -However, SC and IMG show negative relationship with WTP Halal logistics
2.	S Stranieri., E Ricci & A Banterle (2016)	Attitude, perceived behavioural control, habit, socio-demographic and individual characteristics	Attitude, perceived behavioural control, habit, knowledge, concerns, income, gender	Partial Least Square (PLS) methodology	-In this study, only concern does not significantly affect the WTP.

Table 2.6 (Continued)

3.	Mohd Heikal, Muammar Khaddafi, & Malikussaleh Lhokseumawe (2014)	TPB theory used but added with prediction from past behaviour	Attitude, subjective norms, perceived behavioural control and past behaviour	Statistical Package for the Social Sciences (SPSS) software	-Attitude, subjective norms, perceived behavioural control and past behaviour significantly influence WTP
4.	Tung-Ching Lin, Jack Shih-Chieh Hsu, & Hui-Ching Chin (2013)	TPB theory applied with age, gender, perceived benefit and perceived cost.	Age, gender, attitude, subjective norms, perceived behavioural control, perceived benefit, perceived cost	Partial Least Square (PLS) methodology	-Age, gender, attitude, subjective norms and perceived behavioural control shows positive result with WTP
5.	Jan P. Voon, Kwang Sing Ngui & Anand Agrawal (2011)	Theory of Planned Behavior use to examine the willingness to pay (WTP) for organic food	Attitude, subjective norms and affordability (behavioural control).	Partial Least Square (PLS) methodology	-Attitude and subjective norms significantly has positive effects on WTP.
6.	Gretchen Nurse, Yuko Onozaka, & Dawn Thilmany McFadden (2010)	Perceived consumer effectiveness	Perceived consumer effectiveness -environment, economy, social fairness and social responsibility	Statistical Package for the Social Sciences (SPSS) software	-Economy, social fairness and social responsibility significantly affect customers WTP.

2.9 Chapter Summary

Based on the literature review, the willingness to pay Halal logistics clearly influenced by concern on Halal (COH), perception on Halal logistics (POHL), awareness on Halal logistics (AOHL) and knowledge on Halal (KOH). Due to this reason, it is important to examine consumers' willingness to pay halal logistics using these four variables.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter represents the research methodology used in this study regarding the willingness to pay for Halal logistics among Non-Muslim consumers. The population and sample size for the study were presented in this chapter. Sampling method, data collection method and data analysis were also discussed in this chapter.

3.1 Research Design

The study conducted based on quantitative research method. According to Creswell (2003), quantitative research defined as studying on objective theories by examining the relationship between each variable. The variables measured using specific instrument and statistical data procedures. This study guided by a framework to interpret, collect and analyze data. Hypotheses testing is a basis of the research design. Pursuant to that, the result of the study will show significant relationships between dependent and independent variables. Data was obtained at one time specifically from 8th April 2018 to 27th April 2018.

3.2 Sample Design

3.2.1 Population

According to Sekaran and Bougie (2013), population is referring to the number of people or event to study and share a common characteristic required by researchers. The population of this study is Non-Muslim students in Universiti Utara Malaysia (UUM). The current population of this study is approximately 12,457 Non-Muslim students from a total 31,143 students in Universiti Utara Malaysia (UUM). This data

includes all programs of study in Universiti Utara Malaysia (UUM) such as foundation, Bachelor, Master and Doctoral degree.

3.2.2 Sample Size and Unit of Analysis

Non-Muslim students' population number is 12,457 students. According to Krejcie and Morgan (1970), the sample size is about 373 when the population is more than 10,000 ($N < 10,000$, $S = 373$). From 373 respondents, 200 are from paper questionnaire and 173 from the online survey. However, only 300 questionnaires are valid and used for this study. As stated by Bradley, Curry and Devers (2007) a robust sample of research studies is approximately 300 respondents. Hence, 300 respondents used in this study is a robust sample size for this research study. For this study, Non-Muslim students in Universiti Utara Malaysia (UUM) is the unit of analysis in this study. The data collected from individual Non-Muslim students in Universiti Utara Malaysia (UUM).

3.2.3 Sampling Procedures

According to Sekaran and Bougie (2009), there are two types of sampling technique which are probability sampling and non-probability sampling. The probability sampling consists of six categories which are simple random sampling, stratified sampling, systematics sampling, area sampling, double sampling and cluster sampling. Meanwhile, for non-probability sampling, there are only three types of sampling which are convenience sampling, judgement sampling and quota sampling. According to Sekaran (2006), each type of the techniques has different advantages and disadvantages.

Therefore, convenience sampling use in this study because researcher can obtain necessary (basic) and trends data regarding his/her study without complexity using a

randomization sample (Sedgwick, 2013). The convenience sampling is the most convenient whereby, the sample is in near proximity from the researcher and easily to access. It cannot deny that a convenience sampling has its own disadvantages. However, the measures to overcome the disadvantages is discussed in the next section.

3.2.4 Sampling Techniques

In this study, convenience sampling selected as sampling technique. According to Dornyei (2007), convenience sampling often used by researchers because the members of the target population of the study meet several criteria such as ease to access, proximity location, availability at given time and the participant voluntarily in the study. The questionnaire was distributed to Non-Muslim using mall intercept approach (Bush & Hair, 1985) and carried out at Sultanah Bahiyah library in Universiti Utara Malaysia (UUM), classes in Universiti Utara Malaysia (UUM) and V-Mall Universiti Utara Malaysia (UUM). For online survey forms the researcher spreading the online survey forms using Facebook and WhatsApp Application. The in-depth discussion on convenience sampling procedures is presented in section Data Collection Procedures.

3.3 Preparation of Questionnaire

Questionnaire used as a tool to record responses from the respondents in Quantitative approach. In thus study, the questionnaire consist Quantitative research method used in this study. The primary data collection method is via questionnaires. In this study, the questionnaires distributed to Non-Muslim students only. The questionnaire comprises of 27 questions related to the study and consist of six sections (i.e., A, B, C, D, E and F).

Section A: Demographic Data

This section consists demographic data which are gender, age, religion, origin, marital status, program of study, mode of study, occupation, income (RM) and scholarship/sponsorship/study funding (Rezai et al., 2013; Tieman et al., 2013; Golnaz et al., 2012).

Section B: Willingness to pay Halal logistics

This section investigates the willingness to pay for Halal logistics among Non-Muslim consumers. The questionnaire was adapted from Fathi et al., (2016). For example, the question asks whether respondents are willing to pay the extra cost for halal logistics. Section B investigates respondents' willingness to pay Halal logistics. The questionnaires consist of five questions, which are adapted from Fathi et al., (2016). In this section, the interval scale question approach is used from "1" as "strongly disagree", "2" as "disagree", "3" as "neutral", "4" as "agree" and "5" as "strongly agree". Table 3.1 represents the items of willingness to pay Halal logistics.

Table 3.1

Items of Willingness to Pay Halal Logistics

- 1) I am willing to pay extra cost for halal products.
 - 2) I believe paying extra cost could help to ensure the halal products is healthy to consume.
 - 3) I believe paying extra cost could help to ensure the halal products is safety to consume.
 - 4) I am willing to pay more to make sure the halal product transported without any contamination.
 - 5) I am willing to pay more for halal logistics service in order to purchase 100% halal product.
-

Fathi et al., (2016)

Section C: Concern on Halal

This section explores the concern on Halal, which is adapted from Fathi et al., (2016). However, the questionnaire modified so that it is suitable for the study. The

questionnaires inquire of respondent interest on halal food consumption, confidence in the product consumed and examination of the product ingredients carried out. Section C explores the concern on Halal, which is adapted from Fathi et al., (2016). The questions are to inquire respondents' interest on halal food consumption, confidence in the product consumed and examination of the product ingredients carried out. Interval scale question (range from 1 to 5) applied in this section. Table 3.2 represents the items of concern on Halal.

Table 3.2

Items of Concern on Halal

- 1) I have plan to consume food that is Halal
- 2) I am confident with Halal product I consume
- 3) I will make an effort to check on the ingredients of the product

Fathi et al., (2016)

Section D: Perception on Halal logistics

This section explores the perception on Halal logistics whereby the questions were adapted from Fathi et al., (2012). For this study, the questionnaire modified so that it could adapt with the variable and due to subjective norm from the Theory of Planned Behaviour (TPB). For this study, the questionnaires ask the importance among respondents and respondents' family for Halal logistics to preserve the Halal status of the products and to avoid cross contamination during transportation and storage. Section D explores the perception on Halal logistics, which created by following the study conducted by Fathi et al., (2012). Interval scale question (range from 1 to 5) applied in this section. Table 3.3 represents the items of perception on Halal logistics.

Table 3.3

Items of Perception on Halal Logistics

- 1) Halal logistics is important for me and my family in preserving the halal status of products.
- 2) Halal logistics is important for me and my family to avoid the cross-contamination during transportation.
- 3) Halal logistics is important for me and my family to avoid the cross-contamination during storage.

Fathi et al., (2016)

Section E: Awareness on Halal logistics

This section discusses the awareness on Halal logistics adapted from Kamaruddin, Iberahim and Shabudin (2012). For this study, the questionnaires derived from three criteria discussed by Kamaruddin, Iberahim and Shabudin (2012) which are halal certification, monitoring and enforcement. Therefore, the questionnaires for this study, under halal certification aspect, asks the criticality for halal logistics to ensure products consumed by consumers is hygienic, high quality, healthy and safe to consume. Next, under monitoring aspect, the questionnaires ask the criticality of products storage. Lastly, under enforcement aspect, the questionnaires ask the criticality of an upright and ethical halal logistics provider. Section E discusses the awareness on Halal logistics adapted from study conducted by Kamaruddin, Iberahim and Shabudin (2012) whereby discussed on three aspects which are halal certification, monitoring and enforcement. Interval scale question (range from 1 to 5) applied in this section. Table 3.4 represents the items of awareness on Halal logistics.

Table 3.4

Items of Awareness on Halal Logistics

- 1) Halal logistics is important to ensure consumer get hygiene, quality, healthy and safe products.
- 2) It is important for me the product store in place that hygiene, quality and safe.
- 3) It is important for me the logistics service provider transport the product with honest and ethical attitude.

Kamaruddin, Iberahim & Shabudin (2012)

Section F: Knowledge on Halal

This section examines the respondent knowledge on Halal and is adapted from Lewis et al., (2017). The questionnaire from Lewis asks whether the respondents can identify the picture of fly lava and about the willingness to pay for watershed ecosystems. However, in this study the question changed to whether the respondents can identify the Halal logo and about the willingness to pay Halal logistics. Hence, details of each section (A, B, C, D, E and F) are explained as below. Section F consists of three questions, which are to examine respondents' knowledge on Halal. The questions are adapted from Lewis et al., (2017). Interval scale question (range from 1 to 5) applied in this section. Table 3.5 represents the items of knowledge on Halal.

Table 3.5

Items of Knowledge on Halal

- 1) I am knowledgeable about haram and halal issue.
- 2) I can recognize the halal logo.
- 3) I am confident that the halal products with halal logistics are clean, hygiene and safe to be consume or used.

Lewis et al., (2017).

3.4 Instrumentation and Measurement of Variables

3.4.1 Research Instruments

The questionnaire was developed to obtain the responses regarding the willingness to pay Halal logistics. There are six sections which consist of Demographic Profile (Section A), Willingness to Pay Halal Logistics (Section B), Concern on Halal (Section C), Perception on Halal Logistics (Section D), Awareness on Halal logistics (Section E) and Knowledge on Halal (Section F) as shown in Table 3.6. On the front page of the booklet of questionnaire, there is cover page introduction.

Table 3.6
Distribution of Items

Section	Variables	Items	Adapted from	Questions	Measurement
A	Demographic Background	11 items	-	Respondent's gender, age, religion, origin, marital status, program of study, mode of study, occupation, income (RM) and scholarship/sponsorship/study funding	
B	Willingness to Pay Halal logistics (WTPHL)	5 items	Fathi, Zailani, Iranmanesh and Kanapathy (2016)	1) I am willing to pay extra cost for halal products. 2) I believe paying extra cost could help to ensure the halal products is healthy to consume. 3) I believe paying extra cost could help to ensure the halal products is safety to consume. 4) I am willing to pay more to make sure the halal product transported without any contamination. 5) I am willing to pay more for halal logistics service in order to purchase 100% halal product.	Likert Scale Strongly agree (5) Agree (4) Neutral (3) Disagree (2) Strongly Disagree (1)
C	Concern on Halal (COH)	3 items	Fathi, Zailani, Iranmanesh and Kanapathy (2016)	1) I have plan to consume food that is Halal 2) I am confident with Halal product I consume 3) I will make an effort to check on the ingredients of the product	
D	Perception on Halal logistics (POHL)	3 items	Fathi, Zailani, Iranmanesh and Kanapathy (2016)	1) Halal logistics is important for me and my family in preserving the halal status of products. 2) Halal logistics is important for me and my family to avoid the cross-contamination during transportation. 3) Halal logistics is important for me and my family to avoid the cross-contamination during storage.	
E	Awareness on Halal logistics (AOHL)	3 items	Kamaruddin, Iberahim and Shabudin (2012)	1) Halal logistics is important to ensure consumer get hygiene, quality, healthy and safe products. 2) It is important for me the product store in place that hygiene, quality and safe. 3) It is important for me the logistics service provider transport the product with honest and ethical attitude.	
F	Knowledge on Halal (KOH)	3 items	Lewis, Popp, English and Odetola, (2017)	1) I am knowledgeable about haram and halal issue. 2) I can recognize the halal logo. 3) I am confident that the halal products with halal logistics are clean, hygiene and safe to be consume or used	

3.4.2 Questionnaire Translation

All the items were adapted from previous English written researchers, therefore there is no need to translate the questionnaire into another language. In addition, the sample of this research is from university. Hence, comprehension of basic English not a problem.

3.4.3 Type of Measurement Scales

Generally, there are four types of scale in research which are interval scale, ordinal scale, nominal scale, and ratio scale. Different scale measure different items. For section A (Demographic Profile), nominal scale was used to measures categorical answer which: gender, age, religion, origin, marital status, program of study, mode of study, occupation, income (RM) and scholarship/sponsorship/study funding. In addition, interval scale was used to measure the variables in section B, C, D, E and F which are willingness to pay Halal logistics (WTPHL), concern on Halal (COH), perception on Halal logistics (POHL), awareness on Halal logistics (AOHL) and knowledge on Halal (KOH).

3.4.4 Scaling Design

Section A inquiries about respondent's demography; section B investigates respondents' willingness to pay for Halal logistics; section C examines respondents' concern on Halal; section D explores the perception on Halal logistics; section E discusses the awareness on Halal logistics and section F explores the knowledge on Halal. Section B, C, D, E and F in this research using nominal scale as a measurement. The nominal scale helps the researcher to get information presents in categorical forms. The items of the questionnaires were adapted from previous researched (Lewis et al.,

2017; Fathi et al., 2016; Kamaruddin, Iberahim and Shabuddin, 2012) Therefore, the questionnaires of this research follow the originality of the Five Point Likert scale. The method of primary data collection was on questionnaires.

The Five Point Likert Scale was used to measure the dependent variable and independent variables shown in Table 3.7. The respondents were required to identify which level they agree and disagree with each of the statements. Table 3.4 shows the rating scale is from 1 to 5 which 1= strongly disagree, 2= disagree, 3= neutral, 4= agree, and 5= strongly agree. The respondents are required to answer all the questions. Table 3.6 represents the rating scale (Five Point Likert Scale).

Table 3.7
Rating Scale (Five Point Likert Scale)

Scale	Description
1	Strongly Disagree
2	Disagree
3	Neutral
4	Agree
5	Strongly Agree

Source: Armstrong and Robert (1987)

3.5 Data Collection Procedures

In order to reduce the bias and avoid the drawbacks the convenience sampling, several steps are carefully initiated during the data collection. There are several steps need to be followed during the session of data collection. The steps are presented in the following statements.

The first step, researcher identify the exact number of sample according to the population size. In this study, the sample size is 373 respondents. However, researcher collected 400 respondents, more than the number required in order to avoid some respondent don't willing to respond. After that, convenience sampling is used to drawn the sample from the population.

The second step, the researcher identifies which locations have heavy traffic to execute the mall intercept. In this study, the questionnaire distributed using two methods: online survey (Facebook and WhatsApp Application) and face to face (library, classes and V-Mall UUM). The researcher identifies which locations have heavy traffic to execute the mall intercept. For online survey, researcher using Facebook (post at NEEWSEED UUM) and WhatsApp application. For face to face, researcher distributed the questionnaire at Sultanah Bahiyah Library, classes and V-Mall Universiti Utara Malaysia (UUM) because these three places were considered as the location that has the most traffic in Universiti Utara Malaysia (UUM).

To reduce the bias, the period of data collection is divided into two sessions which are noon (12.00 p.m. to 2.00 p.m.) and evening (4.00 p.m. to 6.00). Due to the time constraint, researcher allocated 2 hours for each session. Overall, researcher allocated a total of 4 hours per day to collect data. Researcher identified the tenth visitor of the library to participate as a respondent. Before giving the questionnaire paper to the respondent, researcher asks screening question which is "Do you Non-Muslim?". This step is to ensure that the respondent is Non-Muslim students according to the criteria of the sample for this research. If the respondent' is a Muslim, the next tenth library visitors will be approached.

According to Sekaran and Bougie (2013), academic research, usually employed questionnaire, interview and observation. This study is conducted in quantitative approach. Therefore, the most suitable data collection would be the questionnaires. Twenty-five days is allocated for the data collection which starts in 8th April 2018 to 27th April 2018. The collection of data was started immediately after supervisor approved the questionnaire. To collect an adequate total number of returned questionnaires which is 400 sets of questionnaires, the researcher would extend the data collection period for five more days if the returned questionnaires insufficient. As discussed in the section of sampling technique, the Sultanah Bahiyah Library, classes in Universiti Utara Malaysia (UUM) and V-Mall Universiti Utara Malaysia (UUM) are the locations of the data collection.

3.6 Data Analysis Techniques

In this study, all the raw data processed by using the Statistical Packages for Social Science (SPSS) software version 23.0. The type of data analysis conducted through SPSS software includes descriptive, independent sample T-Test, one-way ANOVA, correlation, reliability and multiple regression analysis. Further information on the technique of data analysis discussed in the subsequent section.

3.6.1 Descriptive Analysis

Descriptive analysis was performed to obtain the minimum value, maximum value, mean and standard deviation of each measurement of the dependent and independent variables. The purpose of this analysis to identify the level of mean and standard deviation for each item.

In addition, frequency analysis approach was also performed to attain the statistic on respondent's demographic factors, which are gender, age, ethnic, origin, marital status, programs of study, mode of study, occupation, income and study funding. This analysis is suitable to determine the frequency and percentage of willingness to pay Halal logistics among Non-Muslim students.

3.6.2 Reliability Analysis

Reliability analysis conducted to test for both stability and consistency of the instrument. According to Nunnally (1987), Cronbach's Alpha "less than 0.5" consider unacceptable, "less than 0.6" consider as poor, "less than 0.70" consider as questionable, "less than 0.8" considered as acceptable, "less than 0.90" consider as good, and "more than 0.90" considered as excellent as indicated in Table 3.8.

Table 3.8
The Range of Cronbach's Alpha Value with Reliability

Range of Cronbach's Alpha Value	Reliability
$\alpha = 0.9$	Excellent
$0.8 = \alpha < 0.9$	Good
$0.7 = \alpha < 0.8$	Acceptable
$0.6 = \alpha < 0.7$	Questionable
$0.5 = \alpha < 0.6$	Poor
$\alpha < 0.5$	Unacceptable

Source: Nunnally (1987)

3.6.3 Independent Sample T-Test

The main purpose of T-Test analysis is to compare the differences between two different means in groups such as gender (male and female). In this study, independent sample T-test was used to see the differences of willingness to pay Halal logistics between gender (male and female) Non-Muslim consumers.

3.6.4 One -Way ANOVA

The main purpose of one-way ANOVA conducted to test the difference in more than two different groups such as origins, religion, age and income. In this study, one-way ANOVA was used to see the differences of willingness to pay Halal logistics among Non-Muslim religion and state in Malaysia.

3.6.5 Pearson Correlation Analysis

Correlation coefficient calculated to examine the strength of relationships among the variables. The relationship categorized as very strong positive correlations when the measurement is nearer to 1.00. However, the relationship categorized as very strong negative correlation when the measurement is near to -1.00. Pearson Correlation analysis applied to describe the strength of the relationship between the dependent and independent variables in this study (Saunders, Lewis and Thornhill, 2007). In this study, the dependent variable is willingness to pay Halal logistics (WTPHL) and dependent variables were concern on Halal (COH), perception on Halal logistics (POHL), awareness on Halal logistics (AOHL) and knowledge on Halal (KOH). To determine the strength of correlation, the study follow the guidelines by Saunders, Lewis and Thornhill (2007) as despite in Table 3.9.

Table 3.9
Pearson's Indicate of Correlation

Value of Coefficient (r)	The Strength of Correlation
0.70 to 1.00	Very strong positive correlations
0.30 to 0.69	Strong positive correlations
0.01 to 0.29	Weak positive correlations
-0.01 to -0.29	Weak negative correlations
-0.30 to -0.69	Strong negative correlations
-0.70 to -1.00	Very strong negative correlations

Source: Saunders, Lewis and Thornhill (2007)

3.6.6 Multiple Linear Regression Analysis

Hypothesis testing executed by employing multiple regression analysis. The Multiple Regression analysis used to show whether the independent variables have a significant relationship with the dependent variable. The analysis also indicates the relative strength of different independent variable effects on dependent variable (Mooi & Sartedt, 2011). According to Sekaran (2006), the early point of multiple regression analysis is the theoretical model that researcher has created in the earlier stage of the research process. Hence, multiple regression analysis offers a mean on measuring the degree and the character accurately: for the relationship between the independent and dependent variable. Regression coefficient shows the relation importance of each independent variable in the expectation of the dependent variable. Moreover, if the variable coded as significant, it is accordance to the lower value lower than 0.05. The multiple linear regression analysis was utilized in this study to examine the influence of concern on Halal (COH), perception on Halal logistics (POHL), awareness on Halal logistics (AOHL) and knowledge on Halal (KOH) on willingness to pay Halal logistics (WTPHL).

3.7 Chapter Summary

This chapter discusses method conducted by researcher and research design plotted to describe the research approach accepted in the study. Respondents' data obtained through an online survey form and set of questionnaires distributed to Non-Muslim consumers used simple random sampling. Lastly, the respondents' data was analysed using SPSS software version 23.0. The results of the respondents' data are statistically analysed in chapter four.

CHAPTER FOUR

DATA ANALYSIS AND FINDINGS

4.0 Introduction

This chapter discusses the findings based on the statistical results. This chapter consists of overview of data collected, reliability of independent variables and dependent variable, independent sample of T-test, one-way ANOVA, Pearson Correlation, and Multiple Regression Analysis.

4.1 Data Collection and Responses

The questionnaire distributed using two methods: face to face (library, classes and V-Mall UUM) and online survey (Facebook and WhatsApp Application). Out of 400 questionnaires distributed to the Non-Muslim students in UUM, only 393 returned which are 220 questionnaires returned from face to face and 173 from online survey form. However, only 300 questionnaires valid (194 from face to face and 67 questionnaires from online) and 93 questionnaires were discarded (26 from face to face and 106 from online form). Therefore, the questionnaire response rate was 99.93%. Based on Sekaran (2006), 30% response rate is enough for most surveys so the response rate for this study has excellent contributed rate. The report of response rate shown in table 4.1.

Table 4.1
Response Rate

Description	Total (set)	Percentage (%)
Questionnaire from face to face	220	99.93%
Questionnaire valid (face to face)	194	99.74%
Questionnaire from online	173	100%
Questionnaire valid (online)	106	99.33%
Questionnaire discarded	100	23.25%
Questionnaire valid overall	300	76.25%

4.2 Normality Test

Normality test commonly used to show whether the data test in the study are normally distributed or well-modelled. The result from normality test can be obtain from the table or graph. In this study, the data obtain from graph and the data were considered as normally distributed if the point lie closely to the diagonal line in normal Quantile-Quantile Plot (Q-Q Plot). Based on Figure 4.1 until 4.5, data for all variables in this study are considered as normally distributed as the point lie closely to the diagonal line in normal Quantile-Quantile Plot (Q-Q Plot).

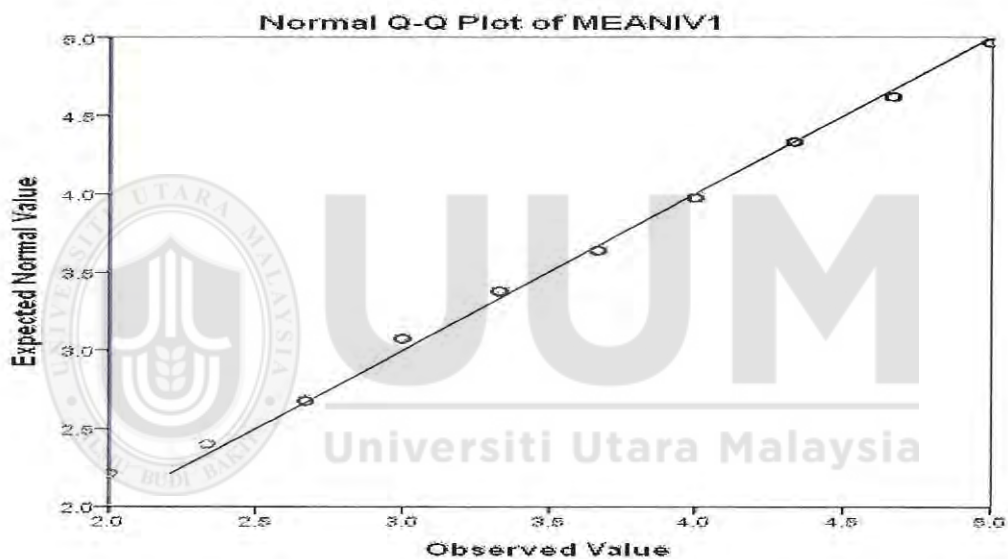


Figure 4.1

Normal Q-Q Plot of Concern on Halal (COH)

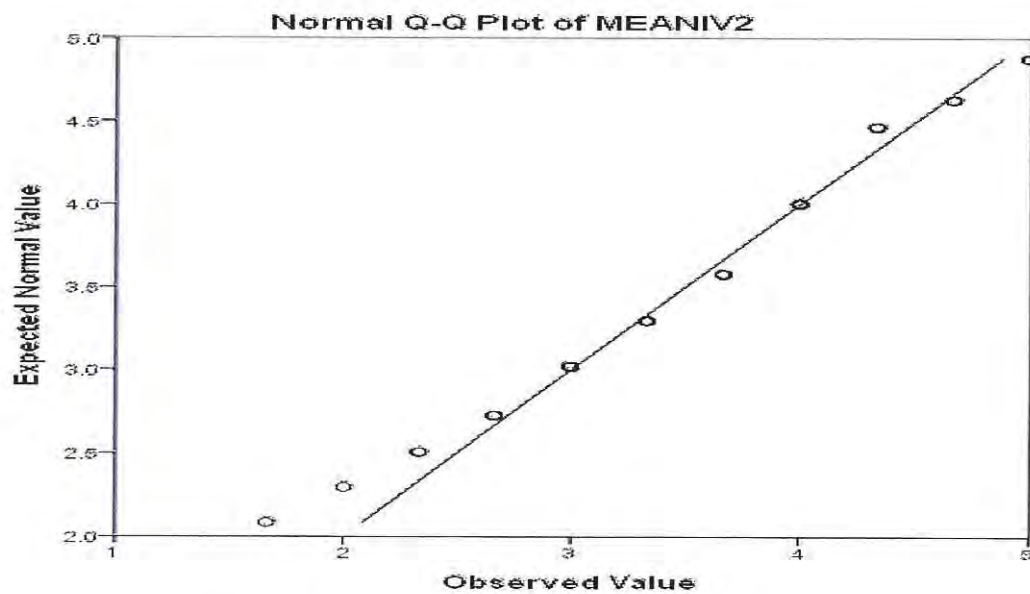


Figure 4.2
Normal Q-Q Plot of Perception on Halal logistics (POHL)

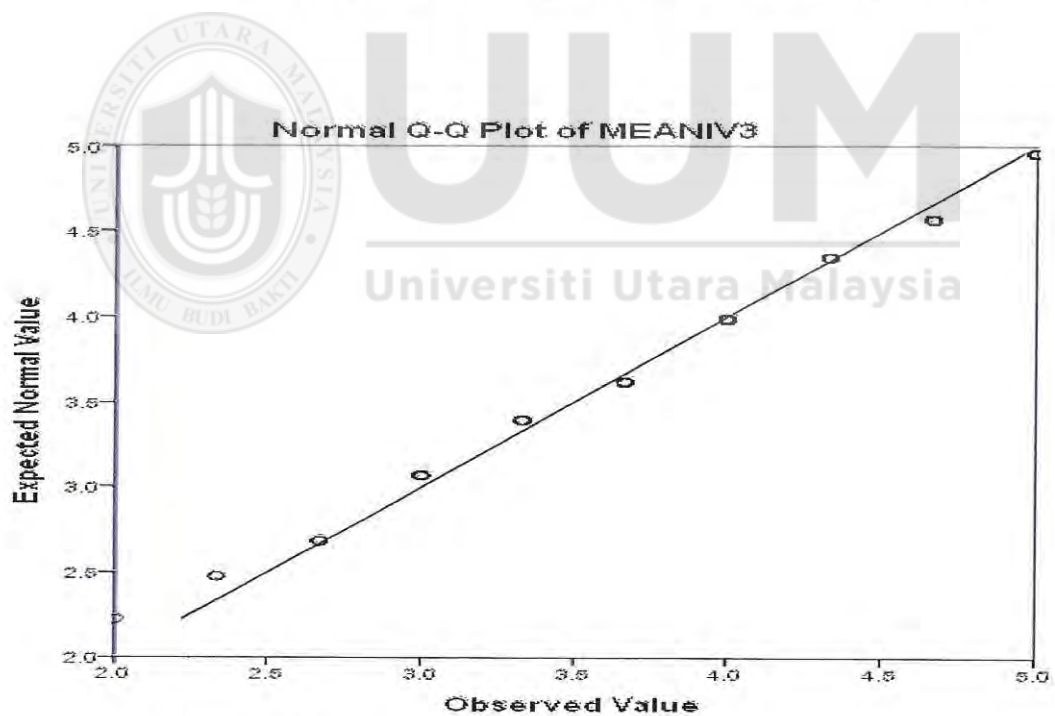


Figure 4.3
Normal Q-Q Plot of Awareness on Halal logistics (AOHL)

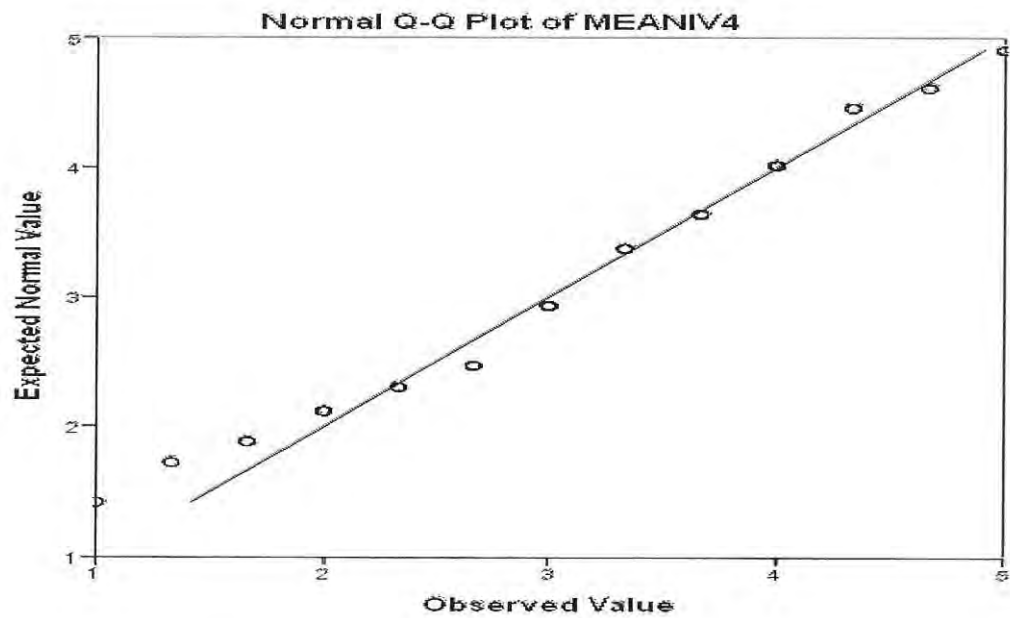


Figure 4.4
Normal Q-Q Plot of Knowledge on Halal (KOH)

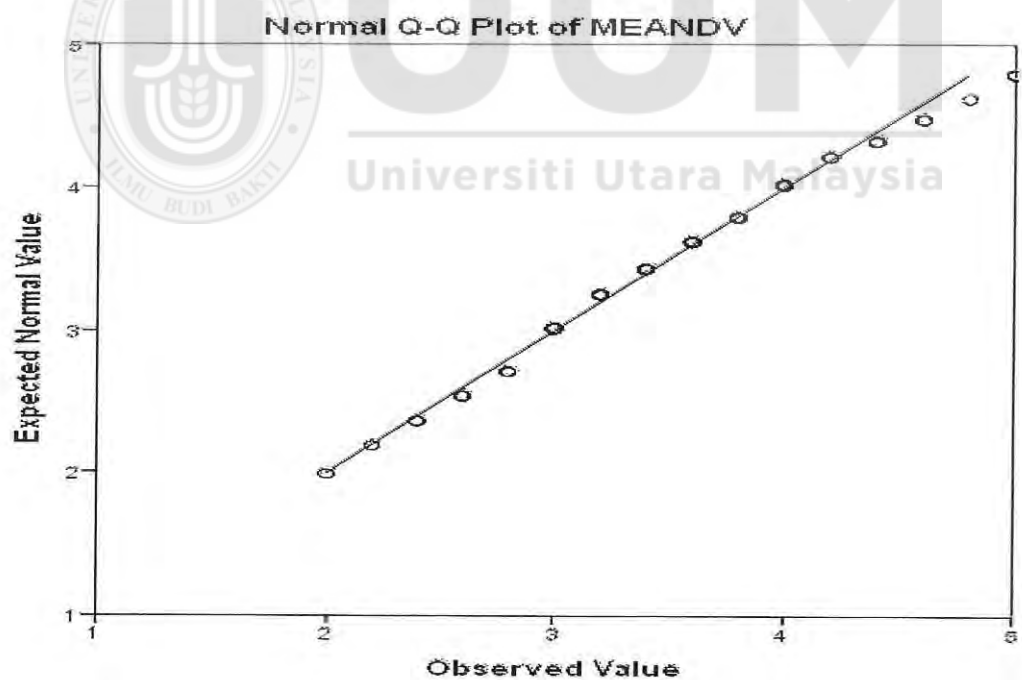


Figure 4.5
Normal Q-Q Plot of Willingness to pay Halal logistics (WTPHL)

4.3 Reliability Test

The reliability test was performed to validate whether the instrument used has good stability and consistency among them. According to Nunnally (1987), Cronbach's Alpha "less than 0.5" consider unacceptable, "less than 0.6" consider as poor, "less than 0.70" consider as questionable, "less than 0.8" considered as acceptable, "less than 0.90" consider as good, and "more than 0.90" considered as excellent. Table 4.2 shows that Cronbach's Alpha measurement of concern on Halal (0.866), perception on Halal logistics (0.793), awareness on Halal logistics (0.790), knowledge on Halal (0.674) and measurement Cronbach's Alpha willingness to pay Halal logistics (0.821). Overall, the value measurement of Cronbach's Alpha for all variables was more than 0.6, which means the study was reliable and acceptable.

Table 4.2
Result of Reliability Analysis

Variable	Number of Items	Cronbach's Alpha	Reliability
Concern on Halal	3	0.866	Good
Perception on Halal logistics	3	0.793	Acceptable
Awareness on Halal logistics	3	0.790	Acceptable
Knowledge on Halal	3	0.674	Questionable
Willingness to Pay Halal logistics	5	0.821	Good

4.4 Demographic Profile of Respondents

The profile of respondents in this study consist of gender, age, religions, origin, marital status, program of study, mode of study, occupation, income and study funding. Details of each demographic background are explained in the following section.

a) Gender

As depicted in Figure 4.6, female respondent's shows exceed the number of male respondents in this study. The total number of female respondents (210 or 70%) and male respondents (90 or 30%). Figure 4.6 depicts gender of respondents.

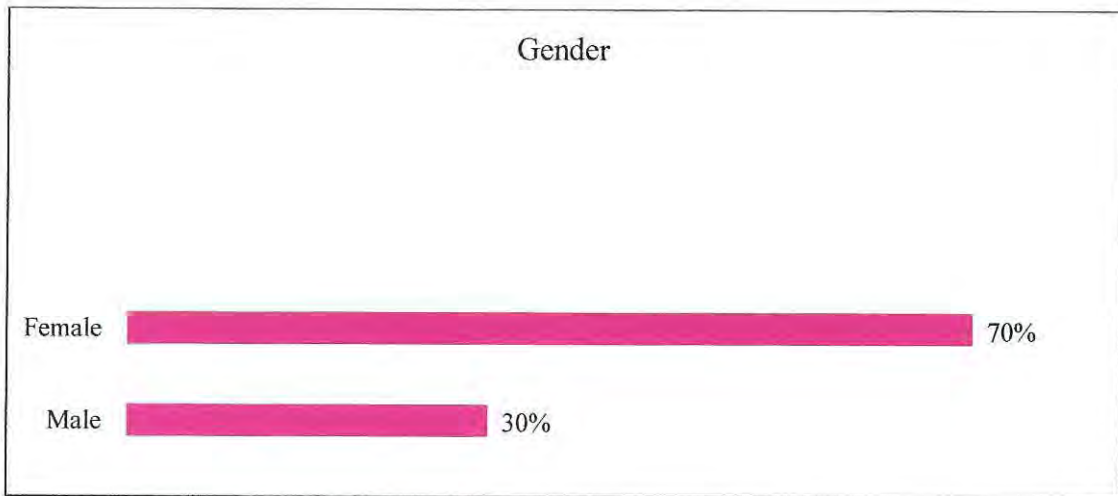


Figure 4.6
Gender of Respondents

b) Age

Out of 300 respondents, the majority of them range at age between 18 and 21 years old (275 or 88.3%), followed by 26 and 29 years old (20 or 6.7%), 18 and 21 years old (10 or 3.3%), and 30 and above (5 or 2.7%). From the data, majority age for this survey is between 18 and 21 years old. Figure 4.7 depicts the age of respondents.

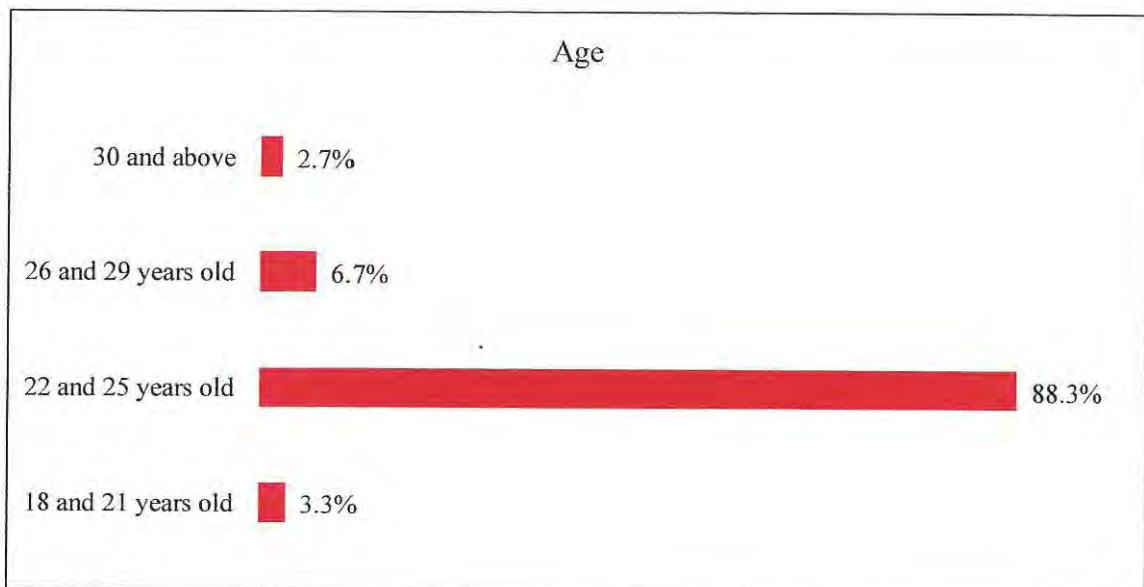


Figure 4.7
Age of Respondents

c) Religion

Majority of Non-Muslim religion involves in this study are Buddhism (154 or 51.3%) followed by Christianity (93 or 31%), Hinduism (43 or 14.3%) and Taoism (10 or 3.3%). Figure 4.8 depicts the Non-Muslim religions of respondents.

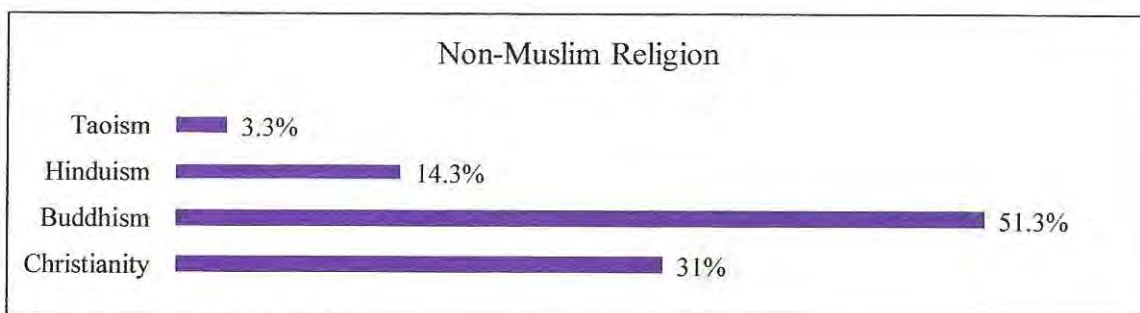


Figure 4.8

Religion of respondents

d) Origin

From origin perspective, majority of respondents are from Penang (51 or 17%), followed by Kuala Lumpur (48 or 16%), Kedah (31 or 10.3%), Selangor (27 or 9%), Johor (26 or 8.7%), Pahang (25 or 8.3%), Perak (24 or 8%), Sabah (23 or 7.7%), Melaka (16 or 5.3%), Negeri Sembilan (13 or 4.3%), Perlis (6 or 2%), Kelantan (5 or 1.7%), Terengganu (3 or 1%) and Sarawak (2 or 0.7%). Figure 4.9 depicts the origin of respondents.

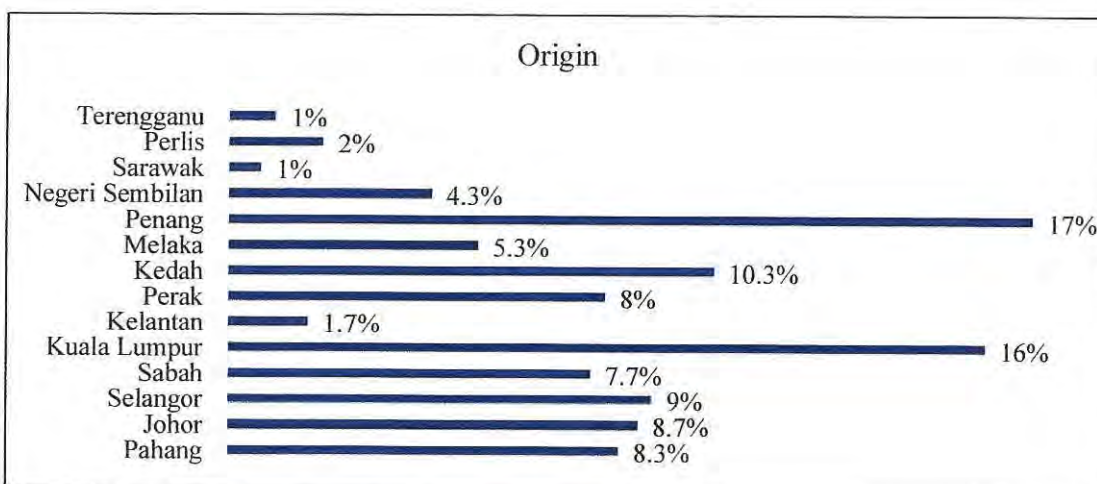


Figure 4.9

Origin of Respondents

e) Marital Status

In this study, most of the respondents' marital status are single (293 or 97.7%) and the balance holds married status (7 or 2.3%). Figure 4.10 depicts the marital status of respondents.

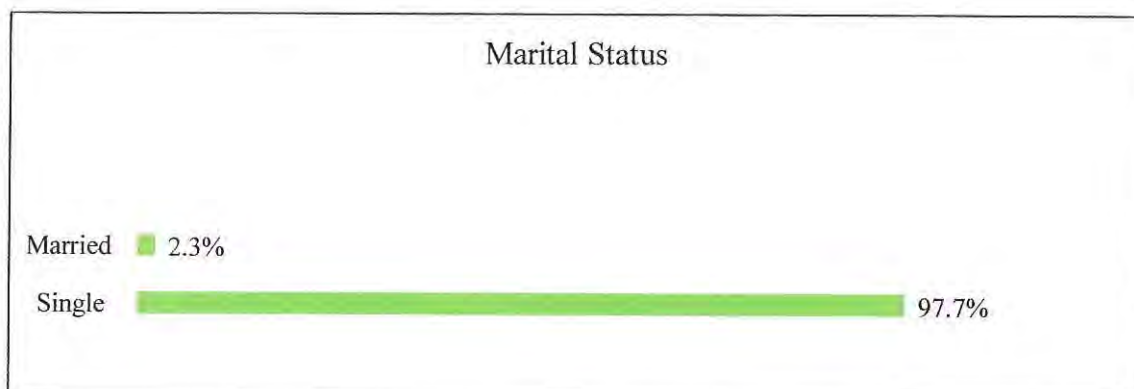


Figure 4.10
Marital Status of Respondents

f) Program of Study

Out of 300 respondents, majority of them have a Bachelor Degree (265 or 88.3%) followed by Master Degree (20 or 6.7%), Foundation (10 or 3.3%) Doctoral Degree (5 or 1.7%). Figure 4.11 depicts a respondents' program of study.

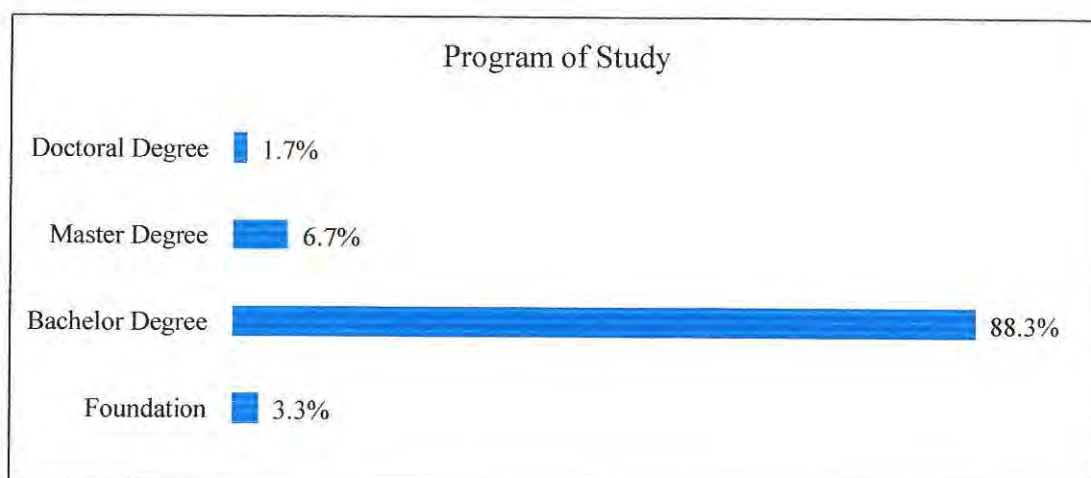


Figure 4.11
Respondent Program of Study

g) Mode of Study

The highest percentage for mode of study owned by Full-time students (292 or 97.3%) followed by Part-time students (8 or 2.7%). Figure 4.12 depicts a respondents' program of study.

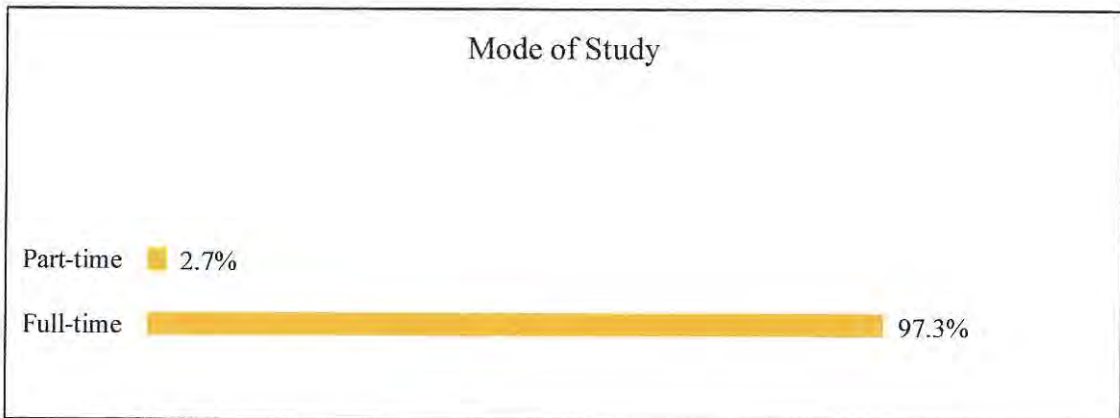


Figure 4.12
Respondents Mode of Study

h) Occupation

Out of 300 respondents in this study, the majority of the respondents are student (286 or 95.3%) followed by respondents who are working in private sector (9 or 3.0%) and public sector (5 or 1.7%). Figure 4.13 depicts the occupational of respondents.

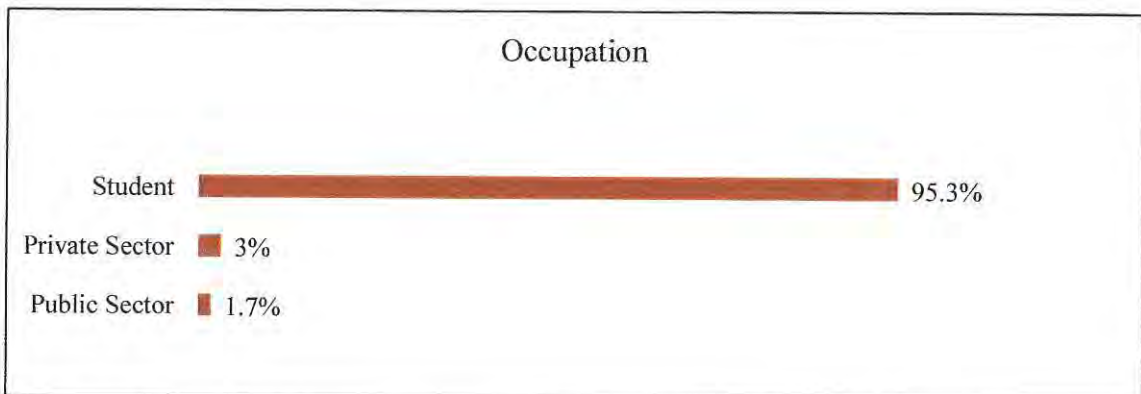


Figure 4.13
Occupation of respondents

i) Household Income (RM)

A household income (RM) categorized into five categories: “less than RM2000”, “RM2001 – RM3000”, “RM3001 – RM4000”, “RM4001 – RM5000” and “above RM5000”. Out of 300 respondents, only two respondents have income above RM5000 (0.7%), three respondents have income RM4001 – RM5000 (1%), four respondents owned income RM3001 – RM4000 (1.3%), and five respondents have income RM2001 – 3000 (1.7%). Majority respondents having income less than RM2000 (286 or 95.3%). Figure 4.14 depicts the occupational of respondents.

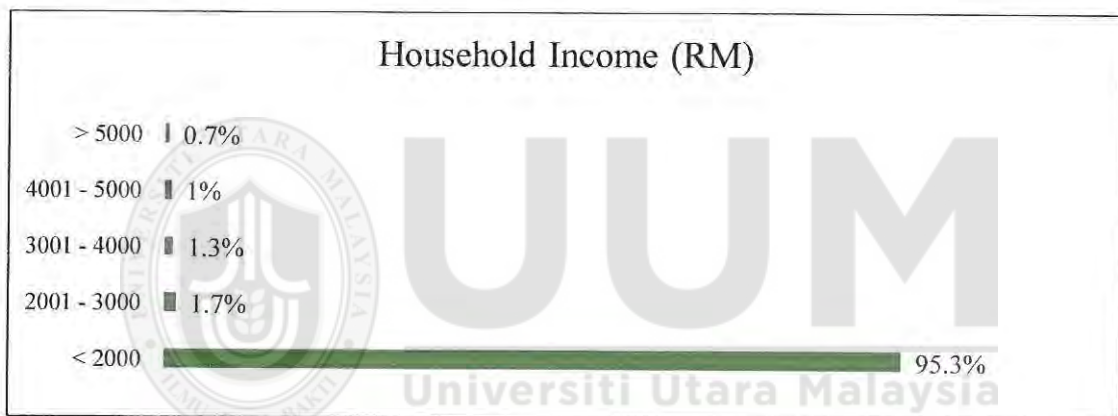


Figure 4.14

Household Income of respondents

j) Study Funding

Out of 300 respondents, majority of respondents' study funding is Perbadanan Tabung Pendidikan Tinggi Nasional (239 or 79.7%). Followed by Jabatan Perkhidmatan Awam (23 or 7.7%), parent (10 or 3.3%), Biasiswa Kerajaan Negeri Sabah (8 or 2.7%), Self-funding (6 or 2.0%), MyBrain15 Scholarship (5 or 1.7%). Therefore, three study funding owned the same percentage (2 or 0.7%): Petronas Scholarship, Kuok Foundation Scholarship and Majlis Amanah Rakyat. Lastly, three less majority study funding also owned the same percentage (1 or 0.3%) was Jabatan Kemajuan Orang

Asli, Yayasan Bank Rakyat and Yayasan Perak. Figure 4.15 depicts the occupational of respondents.

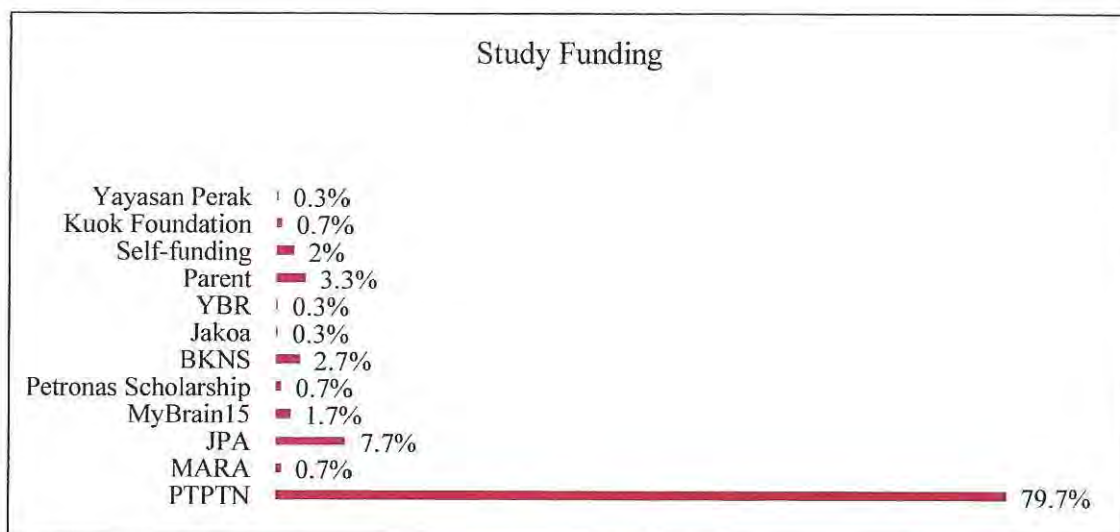


Figure 4.15
Study Funding of Respondents

In conclusion, Table 4.3 depict the summary of respondents' profile to give detail information on demographic background.

Table 4.3
Demographic Background

Category	Frequency (N= 300)	Percentage (100%)
Gender		
Male	90	30
Female	210	70
Age		
18 -21 years	10	3.3
22 - 25 years	285	88.3
26 - 29 years	20	6.7
30 - 34 years	5	2.7
Non-Muslim Religion		
Christianity	93	31
Buddhism	154	51.4
Hinduism	43	14.3
Taoism	10	3.3

Table 4.3 (Continued)

Origin		
Pahang	25	8.3
Johor	26	8.7
Selangor	27	9.0
Sabah	23	7.7
Kuala Lumpur	48	16
Kelantan	5	1.7
Perak	24	8
Kedah	31	10.3
Melaka	16	5.3
Penang	51	17
Negeri Sembilan	13	4.3
Sarawak	2	0.7
Perlis	6	2
Terengganu	3	1
Marital Status		
Single	293	97.7
Married	7	2.3
Program of Study		
Foundation	10	3.3
Bachelor Degree	265	88.3
Master Degree	20	6.7
Doctoral Degree	5	1.7
Mode of Study		
Full-time	292	97.3
Part-time	8	2.7
Occupational		
Public Sector	5	1.7
Private Sector	9	3
Student	286	95.3
Household Income		
< 2000	286	95.3
2001 - 3000	5	1.7
3001 - 4000	4	1.3
4001- 5000	3	1
> 5000	2	0.7

Table 4.3 (Continued)

Study Funding		
PPTN	293	79.7
MARA	2	0.7
JPA	23	7.7
MyBrain15	5	1.7
Petronas Scholarship	2	0.7
BKNS	8	2.7
Jakoa	1	0.3
YBR	1	0.3
Parent	10	3.3
Self-funding	6	2
KUOK Foundation	2	0.7
Yayasan Perak	1	0.3

4.5 Descriptive Analysis of the Main Variables

Descriptive analysis highlighted the mean and standard deviation for independent variables and the dependent variable involves in this study. The mean and standard deviation data can determine the variability of the variables. For this study, the degree of independent variables and dependent variables divided to three class interval which low ($\text{mean} \leq 1.667$), medium ($1.667 < \text{mean} < 3.334$) and high ($\text{mean} \geq 3.334$). Based on Table 4.4, the mean score of the variables display medium value for concern on Halal (3.272). The other three shows high value for the mean score which are perception on Halal logistics (3.658), awareness on Halal Logistics (4.010) and knowledge on Halal (3.924) on willingness to pay Halal logistics. Meanwhile, the standard deviation value shows most of respondents give similar answer in the questionnaire (value less than 1).

Table 4.4
Descriptive Analysis of the Main Variables

Variable	Mean	Standard Deviation	Analysis
Concern on Halal	3.272	0.801	Medium
Perception on Halal logistics	3.658	0.588	High
Awareness on Halal logistics	4.010	0.625	High
Knowledge on Halal	3.924	0.599	High
Willingness to Pay Halal logistics	3.464	0.577	High

Table 4.4 shows mean score and standard deviation for each item in independent variable (concern on Halal, perception on Halal logistics, awareness on Halal logistics and knowledge on Halal) and each dependent variable (willingness to pay Halal logistics). Based on independent variable perspectives, the item “I can recognize the halal logo” shows the highest mean value (4.153). Followed with item “It is important for me the product store in place that hygiene, quality and safe with mean value 4.083. Then, the item “It is important for me the logistics service provider transport the product with honest and ethical attitude” with mean value 4.067. The other item shows the mean value below than three and the lowest mean value from item “I am confident with Halal product I consume” with mean value 3.207.

On the other hand, the value of standard deviation in each item in both and independent variables and dependent variable shows that most of the respondents answer similarly as all value are less than one. Meanwhile, the analysis shows most of the items in a high degree of class interval, but exception the two items from concern on Halal. The two items are; “I am confident with Halal product I consume” (mean = 3.207) and “I will make an effort to check on the ingredients of the product” (mean = 3.270) that in medium degree of class interval. The details of the result of mean and standard deviation for independent variables and a dependent variable indicated in Table 4.5.

Table 4.5
Mean and Standard Deviation Statistical Data

Items	Mean	Standard Deviation	Analysis
Concern on Halal			
1) I have plan to consume food that is Halal	3.340	.8934	High
2) I am confident with Halal product I consume	3.207	.8907	Medium
3) I will make an effort to check on the ingredients of the product	3.270	.9165	Medium
Perception on Halal logistics			
1) Halal logistics is important for me and my family in preserving the halal status of products.	3.597	.71346	High
2) Halal logistics is important for me and my family to avoid the cross-contamination during transportation.	3.680	.71599	High
3) Halal logistics is important for me and my family to avoid the cross-contamination during storage	3.697	.66794	High
Awareness on Halal logistics			
1) Halal logistics is important to ensure consumer get hygiene, quality, healthy and safe products	3.880	.7709	High
2) It is important for me the product store in place that hygiene, quality and safe	4.083	.7336	High
3) It is important for me the logistics service provider transport the product with honest and ethical attitude.	4.067	.7285	High
Knowledge on Halal			
1) I am knowledgeable about haram and halal issue.	3.830	.8062	High
2) I can recognize the halal logo.	4.153	.7472	High
3) I am confident that the halal products with halal logistics are clean, hygiene and safe to be consume or used.	3.790	.7535	High
Willingness to pay Halal logistics			
1) I am willing to pay extra cost for halal products	3.417	.8115	High
2) I believe paying extra cost could help to ensure the halal products is healthy to consume	3.463	.6906	High
3) I believe paying extra cost could help to ensure the halal products is safety to consume	3.447	.7319	High
4) I am willing to pay more to make sure the halal product transported without any contamination	3.533	.7599	High
5) I am willing to pay more for halal logistics service in order to purchase 100% halal product.	3.460	.7813	High

4.6 Result of Hypotheses Testing

The result in this study involve T-test analysis, one-way ANOVA analysis, correlation analysis and multiple regression analysis. All of these used to analyse whether to accept or reject hypotheses made previously.

4.6.1 Independent Sample T-Test

The T-test analysis was performed to address the first research objective which the objective to verify whether there is a significant different of willingness to pay Halal logistics differs between male and female. Hence, the independent sample t-test used to test the following hypothesis:

a) Hypotheses 1

H1: Willingness to pay Halal logistics (WTPHL) differs between male and female

Based on the Table 4.6, Levene's test was found not violated for the present analysis ($F = 0.929$, $p = .363$, $p = 0.05$). The assumption of homogeneity of variance was met. The results show no indicates that there is no significant difference of willingness to pay Halal logistics among Non-Muslim consumer between male and female ($p = 0.280$).

Table 4.6

Result of T-test (Gender and Willingness to Pay Halal Logistics)

		Levene's Test for Equality of variance		T-test for Equality of Means			2- tailed)
		F	Sig.	t	Df	Sig.	
WTPHL .363	Equal variances assumed	.829	.363	-1.083	298	.280	
	Equal variances Not assumed			-1.118	181.196	.265	
	Gender	N	Mean	Std. Deviation	T	Significant	
	Male	90	3.4089	.54539		-1.083	
	Female	210	3.4876	5.8982		-1.118	

4.6.2 One - way ANOVA

One-way ANOVA analysis was performed to address the second and third research objectives. The objectives are to verify whether there is a significant difference of willingness to pay Halal logistics among Non-Muslim religion and state in Malaysia. Hence, the one-way ANOVA analysis used to test the following hypothesis:

b) Hypotheses 2

H2: Willingness to pay Halal logistics (WTPHL) differs among religion

Table 4.7 shows the result of the one-way ANOVA test, the result revealed that there is a significant difference of willingness to pay Halal logistics among religion ($p = 0.000$, $p > 0.05$). Therefore, according to the ANOVA, this study accepted because the significant value is 0.000. In addition, post-hoc result shows a significant difference of willingness to pay Halal logistics between Christianity and Buddhism ($p=0.000$). Hence, the hypothesis 2 is accepted.

Table 4.7

Result of One-Way ANOVA (Religion)

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	8.004	3	2.668	8.624	0.000
Within Groups	91.567	296	.309		
Total	99.571	299			

** $p \leq 0.05$

Pairs	Mean Difference	F	Sig.
Christianity & Buddhism	.35489	8.624	.000

** $p < 0.05$

c) Hypotheses 3

H3: Willingness to pay Halal logistics (WTPHL) differs among state

Based on one-way ANOVA output in Table 4.8, the result reveals that there is a significant difference of willingness to pay Halal logistics among states in Malaysia ($p = 0.031$, $p > 0.05$). Therefore, according to the ANOVA, this study accepted because the significant value is 0.05 or less than 0.05. In addition, post-hoc result shows a significant difference of willingness to pay Halal logistics were found between Penang and Sabah ($p=0.030$) and Penang and Melaka ($p=0.38$). Hence, this hypothesis 3 is accepted.

Table 4.8

Result of One-Way ANOVA (States)

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups 0.031	7.890	13	.607	1.893	
Within Groups	91.681	286	.321		
Total	99.571	299			

** $p \leq 0.05$

Pairs	Mean Difference	F	Sig.
Penang & Sabah	-.51697	1.893	.030
Penang & Melaka	-.57892	1.893	.038

** $p < 0.05$

4.6.3 Pearson Correlation Analysis

The Pearson's Correlation was used to investigate the relationship between independent variables (concern on Halal, perception on Halal logistics, awareness on Halal logistics and knowledge on Halal) and dependent variable (willingness to pay Halal logistics) among Non-Muslim consumers. According to Pallan (2007) correlation coefficient able to give a summary of direction and the strength linear relation between the independent variables (IV) and dependent variable (DV). The Pearson's Correlation coefficient (r) range from -1 to +1 reveals whether there is a positive or negative correlation among them. The analysis was used to test the following hypotheses:

d) Hypotheses 4

H4a: Concern on Halal (COH) significantly relate with willingness to pay Halal logistics (WTPHL) among Non-Muslim consumers

Table 4.9 shows there is a positive and strong correlation between the willingness to pay Halal logistics among Non-Muslim consumers with concern on Halal ($p=0.000 < \alpha$, $r = 0.419$). The r-value refer to the strength and the relationship between the variables tested. This indicated that the increase in concern on Halal would increase the willingness to pay Halal logistics among Non-Muslim consumers. Hence, this H4a is accepted.

Table 4.9

Result of Correlation (Concern on Halal and Willingness to Pay Halal Logistics)

		WTPHL
Concern on Halal	Pearson Correlation	.419**
	Sig. (2-tailed)	.000
	N	300

**Correlation is significant at the 0.01 level (2-tailed).

H4b: Perception on Halal logistics (POHL) significantly relate with willingness to pay Halal logistics (WTPHL) among Non-Muslim consumers

Table 4.10 shows a positive and strong correlation between the willingness to pay Halal logistics among Non-Muslim consumers with perception on Halal logistics ($p=0.000 < \alpha$, $r = 0.383$). The r-value refer to the strength and the relationship between the variables tested. This indicated that the increase in perception on Halal logistics would increase the willingness to pay Halal logistics among Non-Muslim consumers. Hence, this H4b is accepted.

Table 4.10

Result of Correlation (Perception on Halal Logistics and Willingness to Pay Halal Logistics)

		WTPHL
Perception on Halal Logistics	Pearson Correlation	.383**
	Sig. (2-tailed)	.000
	N	300

**Correlation is significant at the 0.01 level (2-tailed).

H4c: Awareness on Halal logistics (AOHL) significantly relate with willingness to pay Halal logistics (WTPHL) among Non-Muslim consumers

Table 4.11 shows a positive relationship and weak correlation between the willingness to pay Halal logistics among Non-Muslim consumers with perception on Halal logistics ($p=0.000 < \alpha$, $r = 0.200$). The r-value refer to the strength and the relationship between the variables tested. This indicated that the increase in perception on Halal logistics would increase the willingness to pay Halal logistics among Non-Muslim consumers. Hence, this H4c is accepted.

Table 4.11

Result of Correlation (Awareness on Halal Logistics and Willingness to Pay Halal Logistics)

		WTPHL
Awareness on Halal Logistics	Pearson Correlation	.200**
	Sig. (2-tailed)	.000
	N	300

**Correlation is significant at the 0.01 level (2-tailed).

H4d: Knowledge on Halal (KOH) significantly relate with willingness to pay Halal logistics (WTPHL) among Non-Muslim consumers

Table 4.12 shows a positive and weak correlation between the willingness to pay Halal logistics among Non-Muslim consumers with knowledge on Halal ($p=0.000 < \alpha$, $r = 0.261$). The r-value refer to the strength and the relationship between the variables tested. This indicated that the increase in perception on Halal logistics would increase the willingness to pay Halal logistics among Non-Muslim consumers. Hence, this H4d is accepted.

Table 4.12

Result of Correlation (Knowledge on Halal and Willingness to Pay Halal Logistics)

		WTPHL
Knowledge on Halal	Pearson Correlation	.261**
	Sig. (2-tailed)	.000
	N	.000

**Correlation is significant at the 0.01 level (2-tailed).

4.6.4 Multiple Linear Regression Analysis

Multiple Linear Regression analysis accomplished to determine the predictor and its contribution to the criterion. Moreover, the multiple regression used to test the hypothesis of the study. The study also wants to find out the which one of the independent variables (concern on Halal, perception on Halal logistics, awareness on Halal logistics and knowledge on Halal) has most effect that influence the dependent

variable (their willingness to pay Halal logistics). Below are the hypotheses involve in this test:

e) Hypotheses 5

H5a: Concern on Halal (COH) significantly influence the willingness to pay Halal logistics (WTPHL) among Non-Muslim consumers.

H5b: Perception on Halal logistics (POHL) significantly influence the willingness to pay Halal logistics (WTPHL) among Non-Muslim consumers.

H5c: Awareness on Halal logistics (AOHL) significantly influence the willingness to pay Halal logistics (WTPHL) among Non-Muslim consumers.

H5d: Knowledge on Halal (KOH) significantly influence the willingness to pay Halal logistics (WTPHL) among Non-Muslim consumers.

As depicted on Table 4.13, the F-statistics (27.070) is large and the corresponding p-value is highly significant ($p=0.000$, $p<0.05$). This indicates that the slope of the estimated linear regression model line is not equal to zero confirming that there is linear relationship between willingness to pay halal logistics and the four predictor variables. The r-squared of 0.268 implies that the four predictor variables explain about 26.8% of the variance in willingness to pay Halal logistics. This is good and respectable result.

Based on Coefficient Table, the highest contribution is found in concern on Halal ($\beta = 0.337$, $p < 0.05$). The Beta value indicates one-unit increase will result an increase in

respondents' willingness to pay Halal logistics among Non-Muslim consumers. For example, one-unit increase in concern on Halal will increase 0.337 in respondents' willingness to pay Halal logistics.

From four predictor variables, only concern on Halal ($\beta = .337, p < 0.05$) and perception on Halal logistics ($\beta = .283, p < 0.05$) are found to be positively significant with willingness to pay Halal logistics ($\beta = .090, p > 0.05$), while awareness on Halal logistics ($\beta = -0.020, p > 0.05$) and knowledge on Halal ($\beta = .090, p > 0.05$). So, only H5a and H5b accepted. Meanwhile, the H5c and H5d were rejected.

Table 4.13

Result of Regression (Concern on Halal (COH), Perception on Halal logistics (POHL), Awareness on Halal logistics (AOHL) and Knowledge on Halal (KOH) with Willingness to pay Halal logistics (WTPHL).

Variables	Standardized Beta	T	Sig.
Constant		6.654	.000
COH	.337	6.495	.000
POHL	.283	4.752	.000
AOHL	-.020	-.340	.734
POH	.090	1.618	.107
Sig	0.000		
F	27.070		
R Square	.268		
Adjusted R Square	.259		

4.7 Summary of Findings

Out of eleven hypotheses, eight hypotheses accepted while other three hypotheses rejected. The result summarized in Table 4.14.

Table 4.14
Summary of Hypotheses Testing

Hypotheses	Description	Results
H1	Willingness to pay Halal logistics (WTPHL) differs between male and female	Rejected
H2	Willingness to pay Halal logistics (WTPHL) differs among religion	Accepted
H3	Willingness to pay Halal logistics (WTPHL) differs among state	Accepted
H4a	Concern on Halal (COH) significantly relate with willingness to pay Halal logistics (WTPHL) among Non-Muslim consumers	Accepted
H4b	Perception on Halal logistics (POHL) significantly relate with willingness to pay Halal logistics (WTPHL) among Non-Muslim consumers	Accepted
H4c	Awareness on Halal logistics (AOHL) significantly relate with willingness to pay Halal logistics (WTPHL) among Non-Muslim consumers	Accepted
H4d	Knowledge on Halal (KOH) significantly relate with willingness to pay Halal logistics (WTPHL) among Non-Muslim consumers	Accepted
H5a	Concern on Halal (COH) significantly influence the willingness to pay Halal logistics (WTPHL) among Non-Muslim consumers	Accepted
H5b	Perception on Halal logistics (POHL) significantly influence the willingness to pay Halal logistics (WTPHL) among Non-Muslim consumers	Accepted
H5c	Awareness on Halal logistics (AOHL) significantly influence the willingness to pay Halal logistics (WTPHL) among Non-Muslim consumers	Rejected
H5d	Knowledge on Halal (KOH) significantly influence the willingness to pay Halal logistics (WTPHL) among Non-Muslim consumers	Rejected

4.8 Chapter Summary

In this study, normality test and descriptive analysis was implemented to confirm the reliability of the instrument employed in the study. In addition, the t-test analysis, one-way ANOVA analysis, correlation analysis and multiple regression analysis carried out to test the hypotheses developed in this study.



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CHAPTER FIVE

DISCUSSION AND CONCLUSION

5.0 Introduction

This chapter discusses about the overall study based on the analysis result on previous chapters. Moreover, this chapter discuss on the limitation of this study as well as several recommendations for future study. Finally, the conclusion is made at the end of this chapter.

5.1 Summary of Findings

The following sections discuss the finding of the study in detail. The section organized based on hypotheses developed previously.

H1: Willingness to pay Halal logistics (WTPHL) differs between male and female

The results of the t-test analysis (refer Table 4.6) revealed that female and male have no significant different in their willingness to pay Halal logistics. The possible reason for this because both of male and female gender have almost similar income level which might not limit their willingness to pay extra for Halal logistics service (refer Table 4.5). This finding consistent with past studies by Fatihah and Rahim (2017), Babatunde, Oyedeki, Omoniwa and Adenuga, (2016) which also revealed that gender has no significant relationship with willingness to pay. They described in their study gender was not significant in influencing consumers' willingness to pay. This is because the willingness to pay behaviour is highly dependent on one's self.

H2: Willingness to pay Halal logistics (WTPHL) differs among religion

One-way ANOVA result (refer Table 4.7) revealed that there is a significant different of willingness to pay Halal logistics among religion ($p = 0.000$, $p > 0.05$). The Non-Muslim religion in this study are Christian, Buddhism, Hinduism and Taoism. Based on the result, the significant difference was found between Christian and Buddhism has ($p = 0.000$, $p > 0.05$). The possible reason for this study because Christian started accepting Halal due to hygiene, safety and quality issue. However, Buddhism has negative perception on Halal. The statement support by Yusoff and Sarjoon (2016) that revealed Buddhism religion make campaign Anti-Halal and Anti-Animal Slaughtering process to sabotage Muslim economic pride. This finding constant with past study by Basaza, Alier, Kirabira, Ogubi, and Lako (2017). They mention that the religion significantly influences consumers' willingness to pay. The significant relationship indicates that Christian were found to have higher level of willingness to pay compared than Buddhism. This is because, Christian consumers has good perception on Halal which might lead them willing to pay.

H3: Difference of willingness to pay Halal logistics (WTPHL) among states

Based on one-way ANOVA analysis (refer Table 4.8), the result reveals that there is a significant different of willingness to pay Halal logistics among states in Malaysia ($p = 0.031$, $p > 0.05$). There are fourteen states in this study: Pahang, Johor, Selangor, Sabah, Kuala Lumpur, Kelantan, Perak, Kedah, Melaka, Penang, Negeri Sembilan, Sarawak, Perlis and Terengganu. Based on post-hoc analysis, the significant different are found between Penang and Sabah ($p = 0.030$) and between Penang and Melaka ($p = 0.038$). One possible reason for this because in Penang has majority of Non-Muslim religion compared than Melaka. Meanwhile, Sabah has mixed multiracial ethics in their family

itself. This finding has consistent with previous study by Asgary et al., (2014) as they found there is a significant different of consumers' willingness to pay based on where the state or location they live. The reason is because every state has they own culture and beliefs that may influence the consumers' willingness to pay.

H4a: The relationship between concern on Halal (COH) and willingness to pay Halal logistics (WTPHL)

The result from correlation analysis (refer Table 4.9) shows positive and low correlation between concern on Halal logistics and willingness to pay Halal logistics among Non-Muslim consumers ($r = 0.419$, $p > 0.01$). The result is the highest in this study. This indicated that, the highest level of concern on Halal would greatly affect their willingness to pay Halal logistics. The finding constant with previous study made by Fathi et al., (2106) as they also found a significant relationship between concern on Halal and willingness to pay Halal logistics. The significant relationship between concern on Halal and willingness to pay Halal logistics because consumer believe products that have Halal tag/label was manufactured with cleanliness, hygiene and quality.

H4b: Perception on Halal logistics (POHL) significantly relate with willingness to pay Halal logistics (WTPHL) among Non-Muslim consumers

The result from correlation analysis (refer Table 4.10) shows a positive and low correlation between perception on Halal logistics and willingness to pay Halal logistics among Non-Muslim consumers ($r = 0.383$, $p > 0.01$). The result is the second highest after concern on Halal, it can conclude that a positive perception can make consumer willing to pay for the services, foods or products (Grunet, 2005). The finding consistent

with study made by Fathi et al., (2016) and Rezai et al., (2013) as they also found a significant relationship between perception on Halal logistics and willingness to pay Halal logistics. The significant relationship between perception on Halal logistics and willingness to pay Halal logistics because consumers' positive perception toward Halal logistics would influence they willingness to pay. It is because a positive perception toward Halal logistics is determined by the total set of access control beliefs that would possible perform the consumers' behaviour (willingness to pay).

H4c: Awareness on Halal logistics (AOHL) significantly relate with willingness to pay Halal logistics (WTPHL) among Non-Muslim consumers

The result from correlation analysis (refer Table 4.11) shows positive and little correlation between awareness on Halal logistics and willingness to pay Halal logistics among Non-Muslim consumers ($r = 0.200$, $p > 0.01$). This correlation is the lowest positive correlation in this study and the result indicates the awareness on Halal logistics less affect the willingness to pay Halal logistics among Non-Muslim consumers. However, this study still proves that the customers' willingness to pay when they have an awareness on Halal logistics. The finding consistent with previous study made by Owusu and Anifori (2013) as they also found that a significant relationship between awareness on Halal logistics and willingness to pay Halal logistics. The significant relationship between awareness on Halal logistics and willingness to pay Halal logistics because consumers' that have high awareness on something issues/things could be an important way to predict their behaviours. If a consumer has high awareness toward certain things, it will influence the consumers' behaviours and consequently their willingness to pay.

H4d: Knowledge on Halal (KOH) significantly relate with willingness to pay Halal logistics (WTPHL) among Non-Muslim consumers

The result from correlation analysis (refer Table 4.12) shows a little positive correlation between knowledge on Halal and willingness to pay Halal logistics among Non-Muslim consumers ($r = 0.261$, $p > 0.01$). This correlation has the lowest value of the Pearson Correlation compared than other three independent variables. It shows that knowledge on Halal just gives less effect on the willingness to pay Halal logistics among Non-Muslim consumers. The finding consistent with previous study by Bernard and Katie (2006) that shows a significant relationship between knowledge and willingness to pay. The significant relationship between knowledge on Halal and willingness to pay Halal logistics because customers that have knowledge on Halal will have a highest willingness to pay. Since they are more responsible than those do not knowledge on Halal.

H5a: Concern on Halal (COH) significantly influence the willingness to pay Halal logistics (WTPHL) among Non-Muslim consumers

Based on multiple regression result (refer Table 4.13), there is a significantly influence of perception on Halal logistics on willingness to pay Halal logistics among Non-Muslim consumers. The result shows ($p\text{-value} = 0.000$) with the highest Beta value ($b = 0.337$) in this study. This study indicated that there is a strong influence of concern on Halal on willingness to pay Halal logistics. In this study, concern on Halal influence respondents' willingness to pay Halal logistics the most. This result shows respondents that has a high concern on Halal will influence their willingness to pay Halal logistics. The findings of this study constant with past research (Fathi et al., 2016) as they also found out that concern on Halal have significant influence with willingness to pay Halal

logistics. The consumers concern on safety, hygiene and quality will make them willing to pay Halal logistics. It is because they believe it is important to make sure the products they consume was transported without any contamination.

H5b: Perception on Halal logistics (POHL) significantly influence the willingness to pay Halal logistics (WTPHL) among Non-Muslim consumers

Based on multiple regression result (refer Table 4.13), there is a significant influence of perception on Halal logistics on willingness to pay Halal logistics among Non-Muslim consumers. The value shows 0.000 significant values (p-value less than 0.05) with Beta value 0.283. The result indicates that the increasing perception on Halal will increase the same value on willingness to pay Halal logistics among Non-Muslim consumers. The result supported by previous studies Rezai et al., (2013), Lewis et al., (2017) and Fathi et al., (2016) that stated a good perception on Halal logistics will influence customers' willingness to pay for the Halal logistics. They found out that the consumers' positive perception will control consumers' willingness to pay. This is because the consumers positive perception will make the consumers believes that they should consume the Halal products. Then, this situation may lead they perform the behaviour (willingness to pay).

H5c: Awareness on Halal logistics (AOHL) significantly influence the willingness to pay Halal logistics (WTPHL) among Non-Muslim consumers

Based on multiple regression result (refer Table 4.13), there is no significant influence of awareness on Halal logistics on willingness to pay Halal logistics among Non-Muslim consumers. The p-value for awareness on Halal logistics 0.734 means more than 0.05 significant values and the Beta (-0.020, $p > 0.50$). Its mean that, awareness on

Halal logistics does not affect and will not increase willingness to pay Halal logistics among Non-Muslim consumers. The result obtained from this study consistent with past research (Kamaruddin, Iberahim & Shabuddin, 2012). They found out that the consumers' awareness on Halal logistics do not control consumers' willingness to pay. It is because, if the consumers have an awareness about certain Halal, that do not mean they would willingness to pay for it.

H5d: Knowledge on Halal (KOH) significantly influence the willingness to pay Halal logistics (WTPHL) among Non-Muslim consumers

Based on multiple regression result (refer Table 4.13), there is no significant influence of knowledge on Halal on willingness to pay Halal logistics among Non-Muslim consumers. The p-value for knowledge on Halal 0.107 means more than 0.05 significant values. Its mean that, the knowledge about Halal does not affect willingness to pay Halal logistics among Non-Muslim consumers. The result indicates that the increasing knowledge on Halal will not increase willingness to pay Halal logistics among Non-Muslim consumers. The result obtained from this study consistent with past research (Lewis et al., 2017) that found out that knowledge on Halal does not affect consumers' willingness to pay. The reason is because a consumer that have knowledge on Halal do not indicated that they also have a highest willingness to pay.

5.2 Contribution of the Research

The contribution of the research is explained as below.

5.2.1 Theoretical Contribution

For theoretical contributions this study contributes in Theory of Planned Behaviour (TPB). Past study by Fathi et al., (2016) tested Theory of Planned Behaviour (TPB) with willingness to pay Halal logistics (WTPHL). The result revealed only concern on Halal (COH) and perception on Halal logistics (POHL) has significantly influenced the willingness to pay among “Muslim customers”. However, this study added two new variables: concern on Halal (COH) and awareness on Halal logistics (AOHL) to identify whether the four variables (concern on Halal, awareness on Halal logistics, perception on Halal logistics and knowledge on Halal) will give the same result if the respondents change to “Non-Muslim customers”. Therefore, this study will add more knowledge in Theory of Planned Behaviour (TPB). Moreover, as stated by Ajzen and Fishbein (1974) in TPB (Theory of Planned Behaviour), the researcher can add a new factor to become powerful predictors in their study. For that reason, the researcher is confident that the result can contribute to the new knowledge, which support TPB (Theory of Planned Behaviour) and figure out factors that influence the willingness to pay Halal logistics among Non-Muslim consumers.

Furthermore, this study contributes to the academic literature regarding willingness to pay Halal logistics with four predictors (concern on Halal, awareness on Halal logistics, perception on Halal logistics and knowledge on Halal). Lastly, the study is beneficial to researchers and students that have an interest to continue this study as their future studies.

5.2.2 Practical contribution

Determine factors influence the willingness to pay Halal logistics among consumers is the most important step because Halal logistics only exist if the consumers are willing to pay for the services. Then, by knowing the factors that can influence the willingness to pay Halal logistics among consumers, it can help the Halal manufacturer understand the demand for Halal logistics industry in Malaysia. Lastly, it will help the Malaysia government to have a better understanding about Halal logistics industry in Malaysia scenario. Therefore, for practical contributions this research contributes for future investment, manufacturers and human quality of life.

a) Future Investment

This study will help Malaysia government have better understanding about Halal logistics industry in Malaysia scenario. According to Grim and Karim (2011), China is still new in Halal industry, but in 2030, Muslim communities in China will be approximately around 29 Million. As Malaysia and China has become a primary partner in the Halal trading business industry, this situation will give opportunities for Malaysia to start as first Halal logistics business leader and become a world leader for Halal logistics industry.

Furthermore, from the result of this study Malaysia government can know the demand and the willingness to pay Halal logistics among Malaysian. At the same time, the result can help Malaysian government to maintain their image, reputation and Malaysia Halal standard as best world example to benchmarking Halal food.

b) Beneficial for Manufacturers/Logistics Service Provider (LSP)

This study will contribute and give some information to manufacturers/logistics service provider (LSP) about the demand of Halal logistics among Malaysian consumer and whether they willing to pay for Halal logistics service or not. The information can help to encourage the manufacturers/logistics service provider (LSP) to implement Halal logistics. It is because according to Zailani, Kanapathy, Iranmanesh and Tieman (2015) many manufacturers in Malaysia are still afraid to take the chance to adopt Halal supply chain such as Halal logistics for their business. However, following Halal compliance and making an investment in Halal logistics is actually good for investments.

Moreover, this sector is important and the evidence can be seen with Malaysian government supporting this halal logistic service by providing incentives to Halal logistics service providers (HLSPs). The incentives are “income tax exemption (100% tax exemption for 5 years)”, or, “investment tax allowance (100% investment tax allowance for 5 years)” or “exemption of import duty and sales tax for cold room equipment” (Halal Industry Development Corporation, 2012).

c) Quality of Life

This study contributed to consumers’ quality of life because Halal logistics ensure Halal products consume by consumers through quality and safe procedures in supply chain process. Consumers get great quality of life through Halal logistics. It is because Halal logistics make sure consumers get a safe, clean, hygienic and healthy food (Ratanamaneichat & Rakkarn, 2013). Moreover, as stated by Saifah (2010) Malaysia government has qualified Malaysia standard with international quality standard that only specific for Halal logistics (MS1500:2004). This means that Halal logistics in

Malaysia have proven to comply with quality standard required internationally and will contribute to consumers' quality of life (Talbi & Ali, 2009; Thomson, 2009).

5.3 Limitation of the Research

This research is unable to encompass the entire factors due to certain circumstances. According to Brutus, Aguinis and Wassmer (2012), the researcher will have faced several limits in the research. Firstly, the limitations faced by researchers are the accuracy of information in the result of this study does not represent all of the Non-Muslim students in University Utara Malaysia (UUM). Secondly, this study does not consider to test other variables that might mediate or moderate the relationship between independent variables and dependent variable. Finally, the limitation for this study was the sampling technique which is non-probability is a convenient sampling that has high possibility of unfairness and lead more to criticism. However, using convenience sampling could give better result because researcher can obtain necessary (basic) and trends data regarding his/her study without complexity using a randomization sample (Sedgwick, 2013). Despite all the necessity steps in convenient sampling are carefully followed, for future research the probability sampling technique should be considered.

5.4 Suggestion for Future Research

First and foremost, in response to the limitation of previous study that just focuses with Non-Muslim students in in University Utara Malaysia (UUM). Future studies may conduct the similar study in wider scope of respondents' criteria. The reason is that people concern about Halal is different regard where the study conducted. Secondly, this study does not consider to test other variables that might mediate or moderate the relationship between independent variables and dependent variable. It is suggested future studies to include few mediators such as demand and cost to examine consumers'

willingness to pay Halal logistics. Finally, the limitation for this study was sampling technique, for future research it is suggested to use probability sampling technique because the sampling give equal chances to each individual in the population to be selected as sample.

5.5 Conclusion

As a conclusion, this study concerned on the influence of willingness to pay Halal logistics with concern on Halal, perception on Halal logistics, awareness on Halal logistics and knowledge on Halal. Based on the findings of this study, only two independent variables which are concern on Halal and perception on Halal logistics was found to have significant influence on willingness to pay Halal logistics among Non-Muslim consumers'. While, the awareness on Halal logistics and knowledge on Halal were found not to have any influence on consumers' willingness to pay Halal logistics. In addition, based on T-Test result, this study found that male and female (gender) does not influence consumers' willingness to pay Halal logistics. Moreover, for one- way ANOVA result, this study found there are significant relationship between Christian and Buddhism religion. Furthermore, based on one-way ANOVA result for state, there were significant different between Penang and Sabah and between Penang and Melaka.

Based on these findings, logistics service providers (LPS) should take this as an opportunity and put an extra effort to build a better strategy in order to attract more Non-Muslim consumers to accept and willing to pay Halal logistics. As indicated by Karijin, Iris, Florence and Wim (2007) and Fathi et al., (2016), Non-Muslim consumers willing to pay for Halal logistics because they prefer to have products that have Halal label/tag as it carry the quality of the products. On top of that, the government should

take more actions such as exhibition, campaign and any other potential ways to make consumers' willing to pay for Halal logistics as this service interrelated with the status of Halal products received by the consumers at the end of supply chain process.

5.6 Chapter Summary

This chapter provides discussion for each of the results produced in this study. An implication, limitation of study and recommendation also provided that might useful for future studies.



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APPENDIX A:
LETTER REQUESTING DATA NON-MUSLIM STUDENTS IN UUM

Dg Ku Zunaidah binti Ag Majid (820896)
Postgraduate Student of MSc Management

Encik Mohd Zamri Bin Ahmad
Pengarah Jabatan Hal Ehwal Akademik
Universiti Utara Malaysia, 06010,
UUM sintok, Kedah Darul Aman
2018

27 Mac

Tuan/Puan,

Permohonan Statistik Semasa Pelajar siswazah yang bukan beragama Islam (Non-Muslim)

Berhubung dengan perkara di atas, saya, Dg Ku Zunaidah binti Ag Majid, No. Matrik 820896 ingin memohon statistik semasa pelajar siswazah yang bukan beragama Islam (Non-Muslim) bagi keseluruhan pelajar (undergraduate dan postgraduate) di bawah pengurusan pihak tuan/puan.

2. Statistik tersebut akan diguna pakai dalam tugas khusus bagi Research Paper (BPMZ 69912) saya yang bertajuk "Willingness to pay Halal logistics among Non-Muslim Consumers in UUM".

3. Keperluan statistik adalah seperti berikut. Jumlah semasa pelajar siswazah: -

- Keseluruhan pelajar UUM
- Jumlah keseluruhan pelajar Non-Muslim UUM

4. Diharapkan agar permohonan kami ini dapat dipertimbangkan untuk kami melengkapkan tugas khusus pada semester ini. Kami berharap pihak HEA dapat memberikan jawapan secepat mungkin memandangkan kami perlu membuat tugas khusus dengan secepat mungkin.

Kerjasama daripada pihak HEA amatlah dihargai.

Sekian, Terima Kasih.

Yang Benar,

Dg Ku Zunaidah binti Ag Majid (820896)
Student of MSc Management, UUM (011-14151459)

APPENDIX B:
QUESTIONNAIRE



SCHOOL OF BUSINESS MANAGEMENT
UNIVERSITI UTARA MALAYSIA
MASTER OF SCIENCE MANAGEMENT

**“WILLINGNESS TO PAY HALAL LOGISTICS AMONG NON-MUSLIM
CONSUMERS IN UUM”**

Dear sir/madam,

You are invited to participate in my study regarding “Willingness to Pay Halal Logistics among Non-Muslim Consumers in UUM”. I am student from School of Business Management, Universiti Utara Malaysia at Sintok, Kedah, Malaysia. This questionnaire only distributes to UUM Non-Muslim students and it contains 28 questions related to the study.

Therefore, we could very much appreciate if you could kindly respond to the attached questionnaire which consists of five sections, i.e Section A, B, C, D, E and F. Your survey responses will be maintained strictly confidential and data from this research will be report only in the aggregate. Your information will code and will remain confidential. If you have any inquiries, please contact or email me at:

Zunaidah591@gmail.com (011-14151459)

Thank you in advance for your kind attention and full cooperation.

Researchers:

(820896) Dg Ku Zunaidah Binti Ag Majid

“WILLINGNESS TO PAY HALAL LOGISTICS AMONG NON-MUSLIM CONSUMERS IN UUM”

Please tick (/) in the space provided for statements relating to yourself. For open answer, write your answers on the spaces provided correctly and clearly.

Section A: Demographic Data			
1	Gender	Male	Female
2	Age	18 – 21 years old	22 – 23 years old
		26 – 29 years old	30 and above
3	Religions	Christianity	Buddhism
		Hinduism	Others:
4	Origin	Pahang	Terengganu
		Johor	Melaka
		Selangor	Penang
		Sabah	Negeri Sembilan
		Kuala Lumpur	Sarawak
		Kelantan	Perlis
		Perak	Other:
		Kedah	
5	Marital Status	Single	Married
		Separated	Widowed
6	Program of Study	Doctoral Degree	Master Degree
		Bachelor Degree	Foundation
		Others:	
7	Mode of Study	Full-time	Part-time
8	Occupation	Public Sector	Private Sector
		Unemployed	Others:
9	Income (RM)	1 - 2000	2001 - 3000
		3001 – 4000	4001 - 5000
		5001 - 6000	6001 - 7000
		7001 - 8000	Others:
10	Scholarship/Sponsorship/ Funding Study	PTPTN	MARA
		JPA	Others:

For section B, C, D, E and F Please circle (O) in the space provided for statements relating to yourself.

Direction: Please read each statement carefully and select one answer from the scale below.

Section B: Willingness to Pay Halal Logistics						
No.	Items	1	2	3	4	5
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	I am willing to pay extra cost for halal products.	1	2	3	4	5
2	I believe paying extra cost could help to ensure the halal products is healthy to consume	1	2	3	4	5
3	I believe paying extra cost could help to ensure the halal products is safety to consume	1	2	3	4	5
4	I am willing to pay more to make sure the halal product is transported without any contamination	1	2	3	4	5
5	I am willing to pay more for halal logistics service in order to purchase 100% halal product	1	2	3	4	5

Section C: Concern on Halal						
No.	Items	1	2	3	4	5
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	I have plan to consume food that is Halal	1	2	3	4	5
2	I am confident with Halal product I consume	1	2	3	4	5
3	I will make an effort to check on the ingredients of the product	1	2	3	4	5

Section D: Perception on Halal Logistics						
No.	Items	1	2	3	4	5
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	Halal logistics is important for me and my family in preserving the halal status of products	1	2	3	4	5
2	Halal logistics is important for me and my family to avoid the cross-contamination during transportation	1	2	3	4	5
3	Halal logistics is important for me and my family to avoid the cross-contamination during storage	1	2	3	4	5

Section E: Awareness on Halal Logistics						
No.	Items	1	2	3	4	5
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	Halal logistics is important to ensure consumer get hygiene, quality, healthy and safe products	1	2	3	4	5
2	It is important for me the product store in place that hygiene, quality and safe	1	2	3	4	5
3	It is important for me the logistics service provider transport the product with honest and ethical attitude	1	2	3	4	5

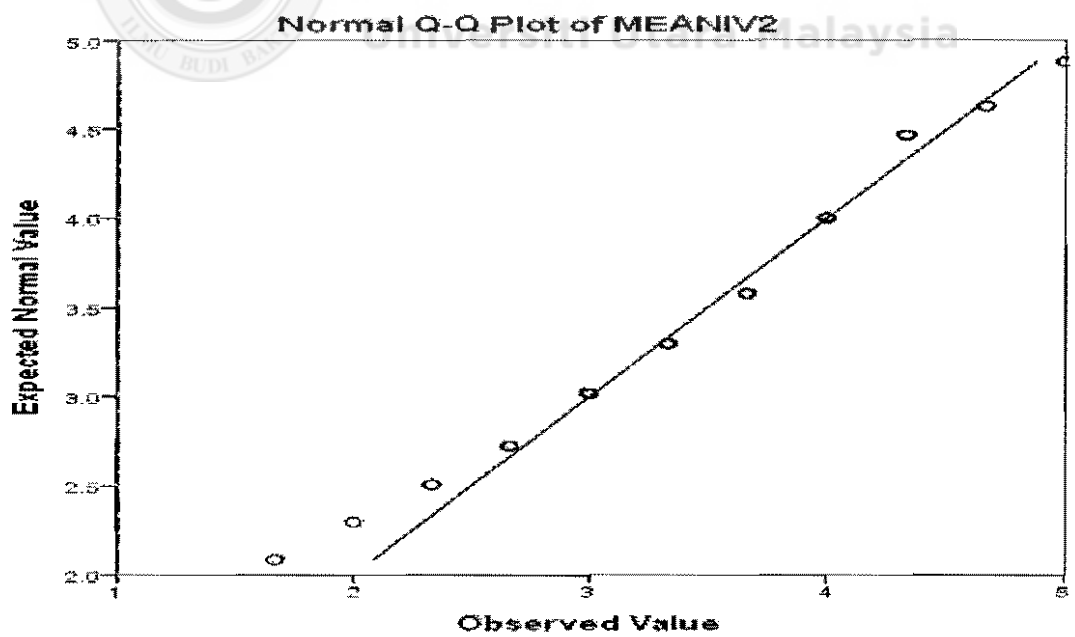
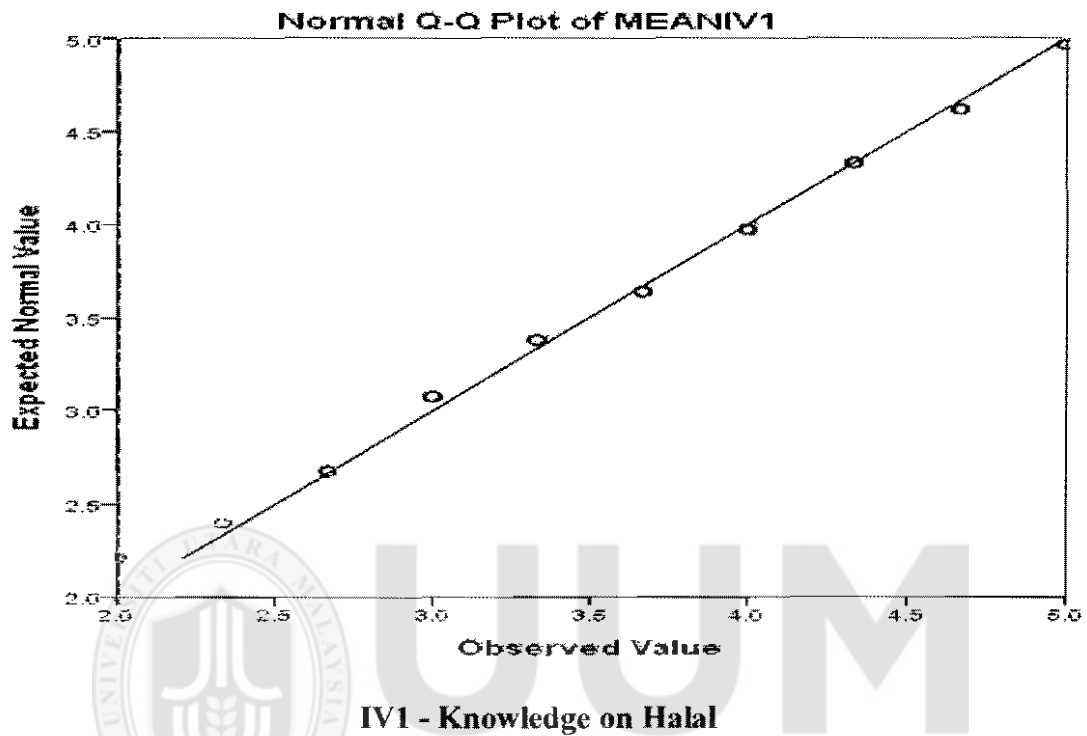
Section F: Knowledge on Halal						
No.	Items	1	2	3	4	5
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	I am knowledgeable about haram and halal issue	1	2	3	4	5
2	I can recognize halal logo	1	2	3	4	5
3	I am confident that the halal products with halal logistics are clean, hygiene and safe to be consume or use.	1	2	3	4	5

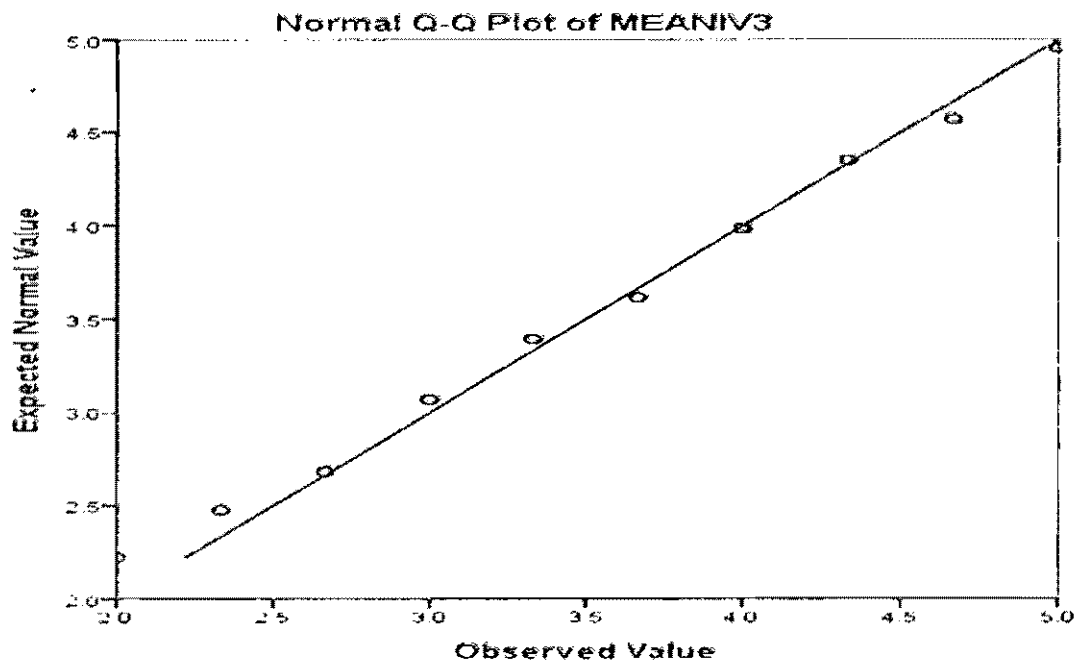
Thank you for cooperation.



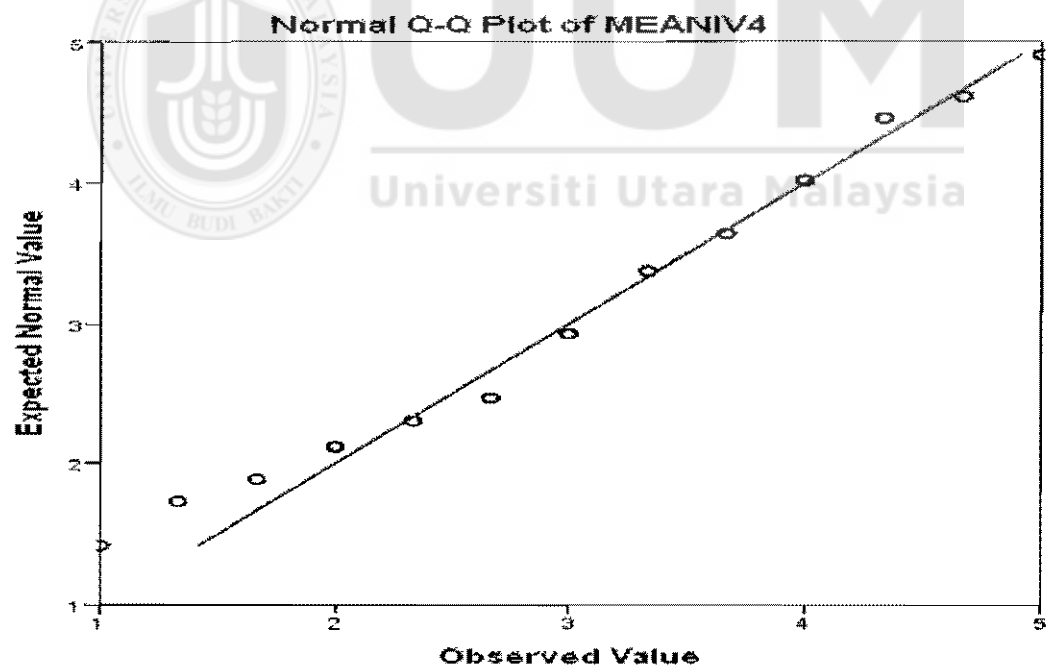
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APPENDIX C:
NORMALITY TEST

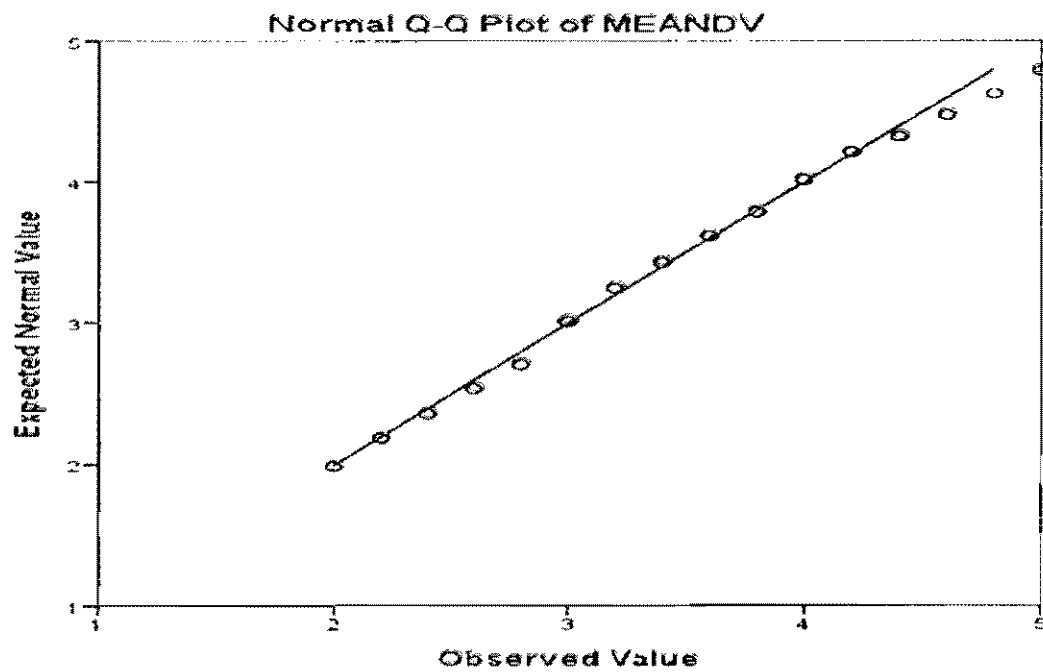




IV3 - Awareness on Halal logistics



IV4 - Concern on Halal



DV - Willingness to pay Halal logistics



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APPENDIX D: **RELIABILITY TEST**

a) Willingness to pay Halal logistics

Case Processing Summary

		N	%
Cases	Valid	300	100.0
	Excluded ^a	0	.0
	Total	300	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.821	5

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
WTPHL1	13.9033	5.338	.621	.784
WTPHL2	13.8567	5.688	.656	.775
WTPHL3	13.8733	5.583	.638	.778
WTPHL4	13.7867	5.680	.571	.798
WTPHL5	13.8600	5.546	.590	.793

b) Concern on Halal

Case Processing Summary

		N	%
Cases	Valid	300	100.0
	Excluded ^a	0	.0
	Total	300	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.866	3

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
COH1	6.4767	2.812	.716	.838
COH2	6.6100	2.734	.764	.795
COH3	6.5467	2.670	.756	.801

c) Perception on Halal logistics

Case Processing Summary

		N	%
Cases	Valid	300	100.0
	Excluded ^a	0	.0
	Total	300	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.793	3

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
POHL1	7.3767	1.674	.506	.854
POHL2	7.2933	1.412	.700	.647
POHL3	7.2767	1.498	.717	.636

d) Awareness on Halal logistics

Case Processing Summary

		N	%
Cases	Valid	300	100.0
	Excluded ^a	0	.0
	Total	300	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.790	3

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
AWHL1	8.1500	1.787	.550	.804
AWHL2	7.9467	1.710	.660	.684
AWHL3	7.9633	1.681	.690	.653

e) Knowledge on Halal

Case Processing Summary

		N	%
Cases	Valid	300	100.0
	Excluded ^a	0	.0
	Total	300	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.674	3

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
KOH1	7.9433	1.632	.458	.620
KOH2	7.6200	1.675	.514	.546
KOH3	7.9833	1.695	.491	.575

APPENDIX E:
DESCRIPTIVE STATISTICS

a) Gender

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Male	90	30.0	30.0	30.0
Female	210	70.0	70.0	100.0
Total	300	100.0	100.0	

b) Age

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 18 -21 years old	10	3.3	3.3	3.3
22 - 25 years old	265	88.3	88.3	91.7
26 -29 years old	20	6.7	6.7	98.3
30 and above	5	1.7	1.7	100.0
Total	300	100.0	100.0	

c) Religion

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Christianity	93	31.0	31.0	31.0
Buddhism	154	51.3	51.3	82.3
Hinduism	43	14.3	14.3	96.7
Taoism	10	3.3	3.3	100.0
Total	300	100.0	100.0	

d) Origin

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Pahang	25	8.3	8.3	8.3
Johor	26	8.7	8.7	17.0
Selangor	27	9.0	9.0	26.0
Sabah	23	7.7	7.7	33.7
Kuala Lumpur	48	16.0	16.0	49.7
Kelantan	5	1.7	1.7	51.3
Perak	24	8.0	8.0	59.3
Kedah	31	10.3	10.3	69.7
Melaka	16	5.3	5.3	75.0
Penang	51	17.0	17.0	92.0
Negeri Sembilan	13	4.3	4.3	96.3
Sarawak	2	.7	.7	97.0
Perlis	6	2.0	2.0	99.0
Terengganu	3	1.0	1.0	100.0
Total	300	100.0	100.0	

e) Marital Status

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Single	293	97.7	97.7	97.7
Married	7	2.3	2.3	100.0
Total	300	100.0	100.0	

f) Program of Study

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Foundation	10	3.3	3.3	3.3
Bachelor Degree	265	88.3	88.3	91.7
Master Degree	20	6.7	6.7	98.3
Doctoral Degree	5	1.7	1.7	100.0
Total	300	100.0	100.0	

g) Mode of Study

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Full-time	292	97.3	97.3	97.3
Part-time	8	2.7	2.7	100.0
Total	300	100.0	100.0	

h) Occupation

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Public Sector	5	1.7	1.7	1.7
Private Sector	9	3.0	3.0	4.7
Student	286	95.3	95.3	100.0
Total	300	100.0	100.0	

i) Income

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid > 2000	286	95.3	95.3	95.3
2001 - 3000	5	1.7	1.7	97.0
3001 - 4000	4	1.3	1.3	98.3
4001 - 5000	3	1.0	1.0	99.3
> 5000	2	.7	.7	100.0
Total	300	100.0	100.0	



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APPENDIX F:
DESCRIPTIVE (MEAN AND STANDARD DEVIATION)

a) Descriptive Statistics for Main Variables

	N	Minimum	Maximum	Sum	Mean	Std. Deviation
COH	300	1.00	5.00	981.67	3.2722	.80109
POHL	300	1.67	5.00	1097.33	3.6578	.58844
AOHL	300	2.00	5.00	1203.00	4.0100	.62487
POH	300	2.00	5.00	1177.33	3.9244	.59871
WTPHL	300	2.00	5.00	1039.20	3.4640	.57707
Valid N (listwise)	300					

b) Descriptive Statistics for Concern on Halal

	N	Minimum	Maximum	Sum	Mean	Std. Deviation
COH1	300	1.00	5.00	1002.00	3.3400	.89838
COH2	300	1.00	5.00	962.00	3.2067	.89066
COH3	300	1.00	5.00	981.00	3.2700	.91646
Valid N (listwise)	300					

c) Descriptive Statistics for Perception on Halal Logistics

	N	Minimum	Maximum	Sum	Mean	Std. Deviation
POHL1	300	1.00	5.00	1079.00	3.5967	.71346
POHL2	300	1.00	5.00	1104.00	3.6800	.71599
POHL3	300	2.00	5.00	1109.00	3.6967	.66794
Valid N (listwise)	300					

d) Descriptive Statistics for Awareness on Halal Logistics

	N	Minimum	Maximum	Sum	Mean	Std. Deviation
AWHL1	300	2.00	5.00	1164.00	3.8800	.77087
AWHL2	300	2.00	5.00	1225.00	4.0833	.73361
AWHL3	300	2.00	5.00	1220.00	4.0667	.72846
Valid N (listwise)	300					

e) Descriptive Statistics for Knowledge on Halal

	N	Minimum	Maximum	Sum	Mean	Std. Deviation
KOH1	300	1.00	5.00	1149.00	3.8300	.80618
KOH2	300	2.00	5.00	1246.00	4.1533	.74723
KOH3	300	1.00	5.00	1137.00	3.7900	.75352
Valid N (listwise)	300					

f) Descriptive Statistics for Willingness to pay on Halal Logistics

	N	Minimum	Maximum	Sum	Mean	Std. Deviation
WTPHL1	300	1.00	5.00	1025.00	3.4167	.81153
WTPHL2	300	1.00	5.00	1039.00	3.4633	.69059
WTPHL3	300	1.00	5.00	1034.00	3.4467	.73185
WTPHL4	300	1.00	5.00	1060.00	3.5333	.75992
WTPHL5	300	1.00	5.00	1038.00	3.4600	.78130
Valid N (listwise)	300					

APPENDIX G:
INDEPENDENT SAMPLE T-TEST

a) Gender and Willingness to Pay Halal logistics

Group Statistics

	Gender	N	Mean	Std. Deviation	Std. Error Mean
WTPHL	Male	90	3.4089	.54539	.05749
	Female	210	3.4876	.58982	.04070

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
WTPHL	Equal variances assumed	.829	.363	-1.083	298	.280	-.07873	.07268	-.22177	.06431
	Equal variances not assumed			-1.118	181.196	.265	-.07873	.07044	-.21772	.06025

APPENDIX H: **ONE-WAY ANOVA**

a) Religion and Willingness to Pay Halal Logistics

Descriptive for Religion

(I) SA3R	(J) SA3R	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Christianity	Buddhism	.35489*	.07304	.000	.1609	.5489
	Hinduism	.13538	.10257	1.000	-.1371	.4078
	Taoism	.41957	.18510	.145	-.0721	.9112
Buddhism	Christianity	-.35489*	.07304	.000	-.5489	-.1609
	Hinduism	-.21951	.09593	.137	-.4743	.0353
	Taoism	.06468	.18150	1.000	-.4174	.5468
Hinduism	Christianity	-.13538	.10257	1.000	-.4078	.1371
	Buddhism	.21951	.09593	.137	-.0353	.4743
	Taoism	.28419	.19527	.880	-.2345	.8028
Taoism	Christianity	-.41957	.18510	.145	-.9112	.0721
	Buddhism	-.06468	.18150	1.000	-.5468	.4174
	Hinduism	-.28419	.19527	.880	-.8028	.2345

*. The mean difference is significant at the 0.05 level.

ANOVA for Religion

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	8.004	3	2.668	8.624	.000
Within Groups	91.567	296	.309		
Total	99.571	299			

b) State and Willingness to Pay Halal Logistics

Multiple Comparisons

Dependent Variable: MEANDV

Bonferroni

(I) SA4OR	(J) SA4OR	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Pahang	Johor	-.09846	.15859	1.000	-.6527	.4558
	Selangor	-.07852	.15715	1.000	-.6277	.4707
	Sabah	-.27304	.16359	1.000	-.8448	.2987
	Kuala Lumpur	.04000	.13965	1.000	-.4480	.5280
	Kelantan	.00000	.27737	1.000	-.9694	.9694
	Perak	-.10167	.16180	1.000	-.6671	.4638
	Kedah	-.03742	.15219	1.000	-.5693	.4945
	Melaka	-.33500	.18127	1.000	-.9685	.2985
	Penang	.24392	.13823	1.000	-.2392	.7270
	Negeri Sembilan	-.11385	.19360	1.000	-.7905	.5628
	Sarawak	.44000	.41606	1.000	-1.0141	1.8941
	Perlis	-.06000	.25739	1.000	-.9596	.8396
	Terengganu	-.22667	.34594	1.000	-1.4357	.9824
Johor	Pahang	.09846	.15859	1.000	-.4558	.6527
	Selangor	.01994	.15557	1.000	-.5238	.5636
	Sabah	-.17458	.16207	1.000	-.7410	.3918
	Kuala Lumpur	.13846	.13787	1.000	-.3434	.6203
	Kelantan	.09846	.27648	1.000	-.8678	1.0647
	Perak	-.00321	.16027	1.000	-.5633	.5569
	Kedah	.06104	.15057	1.000	-.4652	.5873

	Melaka	-.23654	.17990	1.000	-.8653	.3922
	Penang	.34238	.13644	1.000	-.1344	.8192
	Negeri Sembilan	-.01538	.19232	1.000	-.6875	.6568
	Sarawak	.53846	.41546	1.000	-.9135	1.9905
	Perlis	.03846	.25643	1.000	-.8577	.9347
	Terengganu	-.12821	.34523	1.000	-1.3347	1.0783
Selangor	Pahang	.07852	.15715	1.000	-.4707	.6277
	Johor	-.01994	.15557	1.000	-.5636	.5238
	Sabah	-.19452	.16066	1.000	-.7560	.3670
	Kuala Lumpur	.11852	.13620	1.000	-.3575	.5945
	Kelantan	.07852	.27565	1.000	-.8849	1.0419
	Perak	-.02315	.15884	1.000	-.5783	.5320
	Kedah	.04110	.14904	1.000	-.4798	.5620
	Melaka	-.25648	.17863	1.000	-.8808	.3678
	Penang	.32244	.13475	1.000	-.1485	.7934
	Negeri Sembilan	-.03533	.19113	1.000	-.7033	.6327
	Sarawak	.51852	.41491	1.000	-.9316	1.9686
	Perlis	.01852	.25554	1.000	-.8746	.9116
	Terengganu	-.14815	.34457	1.000	-1.3524	1.0561
Sabah	Pahang	.27304	.16359	1.000	-.2987	.8448
	Johor	.17458	.16207	1.000	-.3918	.7410
	Selangor	.19452	.16066	1.000	-.3670	.7560
	Kuala Lumpur	.31304	.14358	1.000	-.1888	.8148
	Kelantan	.27304	.27937	1.000	-.7033	1.2494
	Perak	.17138	.16521	1.000	-.4060	.7488
	Kedah	.23562	.15581	1.000	-.3089	.7802

	Melaka	-.06196	.18432	1.000	-.7061	.5822
	Penang	.51697	.14221	.030	.0200	1.0140
	Negeri Sembilan	.15920	.19646	1.000	-.5274	.8458
	Sarawak	.71304	.41740	1.000	-.7457	2.1718
	Perlis	.21304	.25955	1.000	-.6940	1.1201
	Terengganu	.04638	.34755	1.000	-1.1683	1.2610
Kuala Lumpur	Pahang	-.04000	.13965	1.000	-.5280	.4480
	Johor	-.13846	.13787	1.000	-.6203	.3434
	Selangor	-.11852	.13620	1.000	-.5945	.3575
	Sabah	-.31304	.14358	1.000	-.8148	.1888
	Kelantan	-.04000	.26607	1.000	-.9699	.8899
	Perak	-.14167	.14155	1.000	-.6364	.3530
	Kedah	-.07742	.13046	1.000	-.5334	.3785
	Melaka	-.37500	.16344	1.000	-.9462	.1962
	Penang	.20392	.11386	1.000	-.1940	.6018
	Negeri Sembilan	-.15385	.17702	1.000	-.7725	.4648
	Sarawak	.40000	.40861	1.000	-1.0280	1.8280
	Perlis	-.10000	.24516	1.000	-.9568	.7568
	Terengganu	-.26667	.33695	1.000	-1.4443	.9109
Kelantan	Pahang	.00000	.27737	1.000	-.9694	.9694
	Johor	-.09846	.27648	1.000	-1.0647	.8678
	Selangor	-.07852	.27565	1.000	-1.0419	.8849
	Sabah	-.27304	.27937	1.000	-1.2494	.7033
	Kuala Lumpur	.04000	.26607	1.000	-.8899	.9699
	Perak	-.10167	.27833	1.000	-1.0744	.8711
	Kedah	-.03742	.27286	1.000	-.9910	.9162

	Melaka	-.33500	.29008	1.000	-1.3488	.6788
	Penang	.24392	.26533	1.000	-.6834	1.1712
	Negeri Sembilan	-.11385	.29795	1.000	-1.1551	.9274
	Sarawak	.44000	.47370	1.000	-1.2155	2.0955
	Perlis	-.06000	.34284	1.000	-1.2582	1.1382
	Terengganu	-.22667	.41348	1.000	-1.6717	1.2184
Perak	Pahang	.10167	.16180	1.000	-.4638	.6671
	Johor	.00321	.16027	1.000	-.5569	.5633
	Selangor	.02315	.15884	1.000	-.5320	.5783
	Sabah	-.17138	.16521	1.000	-.7488	.4060
	Kuala Lumpur	.14167	.14155	1.000	-.3530	.6364
	Kelantan	.10167	.27833	1.000	-.8711	1.0744
	Kedah	.06425	.15394	1.000	-.4738	.6023
	Melaka	-.23333	.18273	1.000	-.8720	.4053
	Penang	.34559	.14015	1.000	-.1442	.8354
	Negeri Sembilan	-.01218	.19498	1.000	-.6936	.6692
	Sarawak	.54167	.41670	1.000	-.9147	1.9980
	Perlis	.04167	.25843	1.000	-.8615	.9448
	Terengganu	-.12500	.34671	1.000	-1.3367	1.0867
Kedah	Pahang	.03742	.15219	1.000	-.4945	.5693
	Johor	-.06104	.15057	1.000	-.5873	.4652
	Selangor	-.04110	.14904	1.000	-.5620	.4798
	Sabah	-.23562	.15581	1.000	-.7802	.3089
	Kuala Lumpur	.07742	.13046	1.000	-.3785	.5334
	Kelantan	.03742	.27286	1.000	-.9162	.9910
	Perak	-.06425	.15394	1.000	-.6023	.4738

	Melaka	-.29758	.17429	1.000	-.9067	.3115
	Penang	.28134	.12894	1.000	-.1693	.7320
	Negeri Sembilan	-.07643	.18708	1.000	-.7303	.5774
	Sarawak	.47742	.41306	1.000	-.9662	1.9210
	Perlis	-.02258	.25252	1.000	-.9051	.8600
	Terengganu	-.18925	.34234	1.000	-1.3857	1.0072
Melaka	Pahang	.33500	.18127	1.000	-.2985	.9685
	Johor	.23654	.17990	1.000	-.3922	.8653
	Selangor	.25648	.17863	1.000	-.3678	.8808
	Sabah	.06196	.18432	1.000	-.5822	.7061
	Kuala Lumpur	.37500	.16344	1.000	-.1962	.9462
	Kelantan	.33500	.29008	1.000	-.6788	1.3488
	Perak	.23333	.18273	1.000	-.4053	.8720
	Kedah	.29758	.17429	1.000	-.3115	.9067
	Penang	.57892*	.16224	.038	.0119	1.1459
	Negeri Sembilan	.22115	.21141	1.000	-.5177	.9600
	Sarawak	.77500	.42464	1.000	-.7091	2.2591
	Perlis	.27500	.27104	1.000	-.6723	1.2223
	Terengganu	.10833	.35622	1.000	-1.1366	1.3533
Penang	Pahang	-.24392	.13823	1.000	-.7270	.2392
	Johor	-.34238	.13644	1.000	-.8192	.1344
	Selangor	-.32244	.13475	1.000	-.7934	.1485
	Sabah	-.51697*	.14221	.030	-1.0140	-.0200
	Kuala Lumpur	-.20392	.11386	1.000	-.6018	.1940
	Kelantan	-.24392	.26533	1.000	-1.1712	.6834
	Perak	-.34559	.14015	1.000	-.8354	.1442

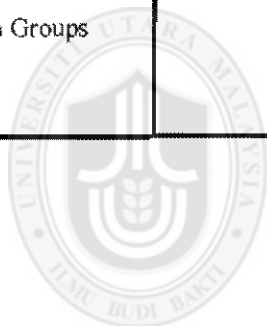
	Kedah	-28134	.12894	1.000	-.7320	.1693
	Melaka	-.57892*	.16224	.038	-1.1459	-.0119
	Negeri Sembilan	-.35777	.17591	1.000	-.9726	.2570
	Sarawak	.19608	.40813	1.000	-1.2303	1.6224
	Perlis	-.30392	.24436	1.000	-1.1579	.5501
	Terengganu	-.47059	.33636	1.000	-1.6461	.7050
Negeri Sembilan	Pahang	.11385	.19360	1.000	-.5628	.7905
	Johor	.01538	.19232	1.000	-.6568	.6875
	Selangor	.03533	.19113	1.000	-.6327	.7033
	Sabah	-.15920	.19646	1.000	-.8458	.5274
	Kuala Lumpur	.15385	.17702	1.000	-.4648	.7725
	Kelantan	.11385	.29795	1.000	-.9274	1.1551
	Perak	.01218	.19498	1.000	-.6692	.6936
	Kedah	.07643	.18708	1.000	-.5774	.7303
	Melaka	-.22115	.21141	1.000	-.9600	.5177
	Penang	.35777	.17591	1.000	-.2570	.9726
	Sarawak	.55385	.43005	1.000	-.9491	2.0568
	Perlis	.05385	.27944	1.000	-.9228	1.0305
	Terengganu	-.11282	.36265	1.000	-1.3802	1.1546
Sarawak	Pahang	-.44000	.41606	1.000	-1.8941	1.0141
	Johor	-.53846	.41546	1.000	-1.9905	.9135
	Selangor	-.51852	.41491	1.000	-1.9686	.9316
	Sabah	-.71304	.41740	1.000	-2.1718	.7457
	Kuala Lumpur	-.40000	.40861	1.000	-1.8280	1.0280
	Kelantan	-.44000	.47370	1.000	-2.0955	1.2155
	Perak	-.54167	.41670	1.000	-1.9980	.9147
	Kedah	-.47742	.41306	1.000	-1.9210	.9662

	Melaka	-.77500	.42464	1.000	-2.2591	.7091
	Penang	-.19608	.40813	1.000	-1.6224	1.2303
	Negeri Sembilan	-.55385	.43005	1.000	-2.0568	.9491
	Perlis	-.50000	.46229	1.000	-2.1156	1.1156
	Terengganu	-.66667	.51685	1.000	-2.4730	1.1397
Perlis	Pahang	.06000	.25739	1.000	-.8396	.9596
	Johor	-.03846	.25643	1.000	-.9347	.8577
	Selangor	-.01852	.25554	1.000	-.9116	.8746
	Sabah	-.21304	.25955	1.000	-1.1201	.6940
	Kuala Lumpur	.10000	.24516	1.000	-.7568	.9568
	Kelantan	.06000	.34284	1.000	-1.1382	1.2582
	Perak	-.04167	.25843	1.000	-.9448	.8615
	Kedah	.02258	.25252	1.000	-.8600	.9051
	Melaka	-.27500	.27104	1.000	-1.2223	.6723
	Penang	.30392	.24436	1.000	-.5501	1.1579
	Negeri Sembilan	-.05385	.27944	1.000	-1.0305	.9228
	Sarawak	.50000	.46229	1.000	-1.1156	2.1156
	Terengganu	-.16667	.40035	1.000	-1.5659	1.2325
Terengganu	Pahang	.22667	.34594	1.000	-.9824	1.4357
	Johor	.12821	.34523	1.000	-1.0783	1.3347
	Selangor	.14815	.34457	1.000	-1.0561	1.3524
	Sabah	-.04638	.34755	1.000	-1.2610	1.1683
	Kuala Lumpur	.26667	.33695	1.000	-.9109	1.4443
	Kelantan	.22667	.41348	1.000	-1.2184	1.6717
	Perak	.12500	.34671	1.000	-1.0867	1.3367
	Kedah	.18925	.34234	1.000	-1.0072	1.3857

Melaka	-.10833	.35622	1.000	-1.3533	1.1366
Penang	.47059	.33636	1.000	-.7050	1.6461
Negeri Sembilan	.11282	.36265	1.000	-1.1546	1.3802
Sarawak	.66667	.51685	1.000	-1.1397	2.4730
Perlis	.16667	.40035	1.000	-1.2325	1.5659

ANOVA for State

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	7.890	13	.607	1.893	.031
Within Groups	91.681	286	.321		
Total	99.571	299			



Universiti Utara Malaysia

APPENDIX I: **PEARSON CORRELATION**

a) Concern on Halal and Willingness to Pay Halal Logistics

		COH	WTPHL
COH	Pearson Correlation	1	.419**
	Sig. (2-tailed)		.000
	N	300	300
WTPHL	Pearson Correlation	.419**	1
	Sig. (2-tailed)	.000	
	N	300	300

** . Correlation is significant at the 0.01 level (2-tailed).

b) Perception on Halal Logistics and Willingness to Pay Halal Logistics

		POHL	WTPHL
POHL	Pearson Correlation	1	.383**
	Sig. (2-tailed)		.000
	N	300	300
WTPHL	Pearson Correlation	.383**	1
	Sig. (2-tailed)	.000	
	N	300	300

** . Correlation is significant at the 0.01 level (2-tailed).

c) Awareness on Halal Logistics and Willingness to Pay Halal Logistics

		AOHL	WTPHL
AOHL	Pearson Correlation	1	.200**
	Sig. (2-tailed)		.000
	N	300	300
WTPHL	Pearson Correlation	.200**	1
	Sig. (2-tailed)	.000	
	N	300	300

** . Correlation is significant at the 0.01 level (2-tailed).

d) Knowledge on Halal and Willingness to Pay Halal Logistics

		KOH	WTPHL
KOH	Pearson Correlation	1	.261**
	Sig. (2-tailed)		.000
	N	300	300
WTPHL	Pearson Correlation	.261**	1
	Sig. (2-tailed)	.000	
	N	300	300

** . Correlation is significant at the 0.01 level (2-tailed).



APPENDIX J: **MULTIPLE REGRESSION**

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	COH, AOHL, POHL, KOH ^b		Enter

a. Dependent Variable: WTPHL

b. All requested variables entered.

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.518 ^a	.268	.259	.49689

a. Predictors: (Constant), COH, AOHL, KOH, POHL

b. Dependent Variable: KOHL

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	26.734	4	6.684	27.070	.000 ^b
	Residual	72.837	295	.247		
	Total	99.571	299			

a. Dependent Variable: WTPHL

b. Predictors: (Constant), COH, AOHL, KOH, POHL

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.391	.246		5.654	.000
KOH	.087	.054	.090	1.618	.107
POHL	.277	.058	.283	4.752	.000
AOHL	-.018	.054	-.020	-.340	.734
COH	.242	.037	.337	6.495	.000

a. Dependent Variable: WTPHL

Residuals Statistics^a

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	2.3161	4.3297	3.4640	.29902	300
Std. Predicted Value	-3.839	2.895	.000	1.000	300
Standard Error of Predicted Value	.029	.131	.061	.020	300
Adjusted Predicted Value	2.2087	4.3274	3.4643	.30067	300
Residual	-1.57352	1.50040	.00000	.49356	300
Std. Residual	-3.167	3.020	.000	.993	300
Stud. Residual	-3.190	3.093	.000	1.003	300
Deleted Residual	-1.59682	1.59132	-.00029	.50301	300
Stud. Deleted Residual	-3.241	3.139	.000	1.008	300
Mahal. Distance	.023	19.788	3.987	3.490	300
Cook's Distance	.000	.138	.004	.010	300
Centered Leverage Value	.000	.066	.013	.012	300

a. Dependent Variable: WTPHL